

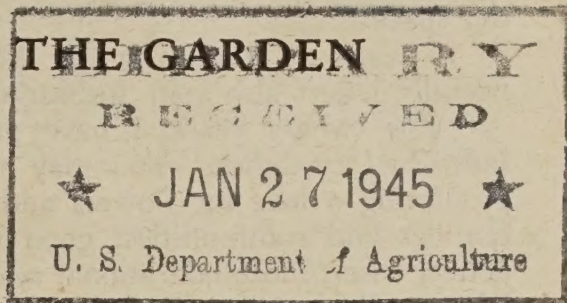
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BULBS FOR POTS

AND SPRING PLANTING IN THE GARDEN



A CATALOG OF BULBS OF THE AMARYLLIS, IRIS, LILY,
ORCHID, ARUM, OXALIS AND OTHER PLANT FAMILIES
Culture Directions For All Bulbs

SPRING 1945

CECIL HOUDYSHEL

1412 THIRD ST.

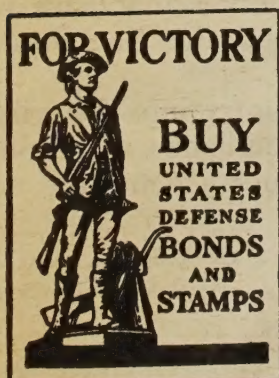
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A PERSONAL LETTER, TO YOU

Dear Floral Friends,

I would like to write you a ten page letter today but the catalog material restricts the space.

I want to thank you for the greatly increased volume of business and the many friendly letters also your forbearance and understanding for occasional delays.

For twenty years, I have prefaced my catalogs with a personal letter,—to each individual customer. You may already have judged that they are for the purpose of promoting a love for flowers and their culture; to promote harmony and kindliness in families and communities; good will between races and nations; better health for all; better, wiser, more educational advantages; higher standards of living and a fuller, richer life for all; attention to the spiritual realities, to that voice within which will guide our thoughts and actions because it is the Voice heard by Moses and Jesus, by many even to the present, who live useful lives; fair play on the part of both labor and capital; freedom for all as the Atlantic Charter proposes.

This is a large and ambitious objective. Too large for me, but we should all do the little or much that we can.

Recently I have often discussed the war phases. The present time seems inopportune to do that. Let us only express the hope that our leaders may be able to realize the principles of the Atlantic Charter. That means a free Poland, free China, free Philippines, free East Indies and India. That means Asia for the Asiatics and America for the Americans. Very small countries needing the alliance with greater powers will no doubt remain in such alliance until peace may be made more secure by a world organization able to restrain aggression and maintain peace. We do hope that international power politics may end. There will never be peace until it does.

The love of flowers has done much to sustain the morale of the English speaking peoples in this war. Very many soldiers in training camps and even a few at the front have asked for and received our catalogs. A couple of our boys have written to us from the south-west Pacific, describing rare and beautiful flowers and one has even undertaken to collect seeds and forward to us. Some even make a garden from collected plants and move it when they advance.

Many boys at the front are thinking about the flowers they may have at home when they return and even buying them, sending them to a friend to take care of. When we at home grow flowers, we are made stronger to endure and are insuring that our boys may find comfort and relaxation in them when they return.

The death of my mother occurred on Dec. 3. Because her life was helpful not only to her family but to others, I am sure that I could write nothing more inspiring than to quote a part of the editorial of A. T. Richardson of the Pomona Progress-Bulletin. He wrote:

"The present world strife is bringing a heartache to every home, but it's also making us realize, to some extent at least, what are the most important things to us as a nation as well as to us individually. The belligerent nations of Europe not only attempted to stamp out religion and any enduring hope that religion brings, but they wrecked what home life they had and degraded womanhood.

"When we look back over our history and think of the influences that have made this country great, our thoughts must center upon the home and the fine ideals of motherhood that have been upheld.

"Among the pioneers who pushed the development of this country into the wilds of the west were great women who not only backed their pioneer husbands with courage and faith, but who, while enduring the hardships of those days, built a home life which is the foundation stone of our national existence.

"Today funeral services were held at Glendale for the mother of Cecil Houdyshel. Mrs. Houdyshel was one of the outstanding pioneer women of this country. She set an ideal for motherhood that emphasizes one of America's great riches.

"She, like her husband, was from a family of pioneers. The Houdyshels emigrated

from Holland to Virginia in 1745. From thence they moved on to the wild frontier of Indiana in the late 1820's. The Cowgers, Mrs. Houdyshel's own family, became residents of Iowa in the 1830's.

"Mrs. Houdyshel, in 1877, emigrated in a covered wagon to the unbroken plains of Kansas. Those were real pioneer times in what was then the far west.

"It was shortly after the turn of the century that the Houdyshels came to Pomona. Mrs. Houdyshel became one of the strong leaders of the First Baptist church of Pomona. She was also one of the most active workers of the Woman's Relief corps, an auxiliary of the Civil War veterans' organization.

"On moving to Glendale her deep interest and able leadership on behalf of the veterans resulted in her becoming an official of the California-Nevada district of the W. R. C. and chaplain of the national organization.

"She applied for and received the appointment as a special pension attorney for Southern California. Scores of pensions for veterans and their widows were obtained by her, and her services were always gratis. In many cases, she assumed all or part of the expense.

"Her death at the age of 88 years and 4 months causes sorrow to the relatives and friends, but it leaves a record that stands as a shining example of Christian motherhood that so badly needs to be emphasized today thruout the world."

Mother left children, grandchildren, great grandchildren and even one great-great grandson. There were five generations when she was living.

I am wishing for you all good health, success with your flowers and in all things and for all people, **Peace** in 1945.

Sincerely,
Cecil Houdyshel.

TERMS AND INSTRUCTIONS FOR ORDERING

Read the following carefully. It will avoid delay or misunderstanding.

Sales Tax. California customers must add 2½% for state sales tax.

Order Early. Late planting is less favorable but better than not at all.

Remit with order by check or M. O. Currency or coins are acceptable but we are not responsible if lost. Stamps reluctantly accepted at 8% discount. Please do not ask for credit.

C. O. D. We do not ship C. O. D. The fees have recently been doubled. Now a \$1.00 order will cost the customer \$1.34 when delivered C. O. D. Besides extra work for us.

Postage prepaid on orders of \$1.00 or over. Under \$1.00 add 10c extra for handling.

Insurance, 10c extra for orders up to \$5.00. 20c for orders \$5.00 to \$25.00. Under present conditions, parcel post is not as safe as formerly and we can guarantee delivery only on insured parcels. Therefore we advise you to insure. Insurance does not, however, cover freezing in transit.

Express is much safer and is advised for large or valuable shipments especially in very cold weather in north. But it is usually a little more expensive and we ship by express only at your expense. We will add extra bulbs on express shipments, of large orders. On small orders, we advise you to add about 10% or more for postage on heavier packing, when the shipment is likely to encounter freezing temperatures.

Wholesale. If dealers will send a list of wants and the quantities, we will quote if our stocks permit. We hope we can issue a wholesale Bulletin, July 1, as formerly. Use your business stationery.

The **Garden Club Bulletin** is out for the duration. We do not have enough labor to take care of much more than the orders received at regular retail prices. This results from a 50% to 100% increase in our retail business in most months without the corresponding increase in available help. Many clubs take advantage of our quantity rates, per doz. or per 100 and express satisfaction. We do our best to please.

Prices given are for one bulb unless otherwise stated. A dozen costs ten times the price of one. Six bulbs are sold at the dozen rate. If not otherwise priced, 100 bulbs are sold for the price of 7 doz., or 70 times the cost of one. Not less than 100 are sold at 100 rate. 50 are sold for the price of 4 doz.

Foreign Orders. Postage is prepaid if no greater than to our 8th zone. Best to remit a little extra. If too much we send extra bulbs. We cannot accept foreign orders for bulbs at the 100 rate to be shipped postpaid. We have several times filled orders from Mexico and other foreign countries, for *Gladiolus* bulbs at the 100 rate, only to find the postage required was almost equal to the price received.

Errors. Our packers make a few, not many. We want to correct them. Notify us at **once** in case of shortage or error. **Unpack** your order as soon as received. Don't wait two weeks, then tell us the bulbs were mouldy.

Partial Shipments. If all bulbs ordered are not included in the first package received, a colored slip informing you will be enclosed. Do not discard this with packing material. Pay attention and avoid correspondence for both of us.

Substitution. If out of a variety, we usually substitute one as near like it as possible, as good or better and of equal or greater value. If you do not approve this, say, "no substitution."

Guarantee. Our bulbs are true to name, and healthy. We do not, however, accept any responsibility for their performance since we cannot control the conditions of their growth. If, in your opinion, our bulbs are not up to our specifications, please notify us at once when you receive them. But do not return them until we explain. Customers some times err in judgment and one returned dwarf *Baby Callas* because they were small. Another returned *Ranunculus* because they were too dry and dead looking.

"**Every Bulb Guaranteed to Grow and Bloom**" is the advertising claim of only a few dealers. There must be some "Catch" about this claim. What if a gopher or field mouse eats the bulb? Or if attacked by disease or pests due to local surroundings? Or no care at all is given the bulbs? In every one of these cases, the dealer guarantees the bulb to bloom. Either his prices are so high he can absorb the loss or he evades the guarantee.

We guarantee our bulbs to be good. We tell you how to grow them. But you must study our culture directions, apply them diligently and accept your share of the responsibility.

Culture directions are not sent with bulbs as all necessary information is given in this catalog.

Catalogs. **Spring Catalog** is mailed Jan. 15. **Fall Catalog** Aug. 15. Under present conditions of shop delays and delay in mails, the catalogs may arrive late. But they are worth waiting for. If over 2 weeks late they may be lost in mail. I suggest you notify us and also send 3c for first class mail delivery or 16c for air mail delivery. If no orders are received for two years, names are dropped from our mailing lists. If you are no longer interested in bulbs, permanently or temporarily, please ask your postmaster to return this catalog at our expense.

Correspondence. We enjoy and appreciate the friendly letters we receive. We answer these twice a year in our **Introductory Letter**. I regret that I am unable to write individually to each. On some days in the busy season our first class mail will go over 250 pieces. At this time we must use our too small office force for packing bulbs and my time is almost wholly taken by supervision of ranch and my part of office work. No day's work is shorter than 10 hours and sometimes extends to 16 and even more.

We receive many requests for information about growing bulbs. This catalog is written to furnish that as well as to list the bulbs. You will find everything here that is necessary. If you just must ask questions make them in the form of a questionnaire in which I can check the true answers. Don't forget to use a self-addressed post card or enclose stamped, addressed envelope.

Identifying Bulbs. We can usually identify your unknown bulbs. The service is

gratis. Sometimes we can do this from the flowers and foliage, tho it is better to include a bulb and to give the case history and all known facts. In some cases we must grow a bulb a year to determine it. Then we inform you. We cannot undertake to identify horticultural varieties of Iris, Gladiolus, etc. Enclose addressed post card for reply.

Time of Delivery. We deliver all bulbs as promptly as possible. Lack of sufficient labor sometimes delays us a little but so far we have been able to deliver every order at the correct planting time or before.

GENERAL CULTURE DIRECTIONS

The best bulb soil is a rich sandy loam. Only a few, like Bearded Iris, prefer heavy soil. But nearly all bulbs do well in heavy soil, especially if plenty of humus is added.

All soils require the addition of large amounts of humus. You should compost all weeds, leaves and small branches. If possible, add manure to this and when well rotted and fine turn under and thoroly mix with the soil.

Fertilizers. Animal manures are the best. Use them with compost as explained. Do not use fresh manure except as a light mulch for certain growing plants and experiment on a few first as too much quickly destroys a plant. Do not add fresh manure or commercial fertilizer to soil just before planting bulbs or seeds. It would be as logical to give a day-old baby a tough steak, a piece of apple pie and two cups of coffee. Fertilize only healthy, thrifty plants. What would you think of a doctor who ordered a big meal for a sick man as a means of recovery?

After Blooming, many persons neglect their bulbs. A Gladiolus must grow and fatten at least two months after flowering and 3 or 4 mo. are better. Amaryllis should grow with luxuriant foliage until late November or longer if it does not begin to yellow.

Let us consider the annual growth cycle of a bulb.

A dormant bulb contains a flower bud and short new leaves. There is stored up food in the form of starches, etc., and also enzymes for digesting this food. While dormant, the stored up starches are turned into soluble sugar. Roots, buds and foliage begin to develop in their natural order and your care is rewarded. When thru flowering, the bulb has become smaller and is soft instead of firm and plump. This is a critical time. The bulb may appear at a pause for a short time but when a good root system has developed it will begin active growth. Encourage that. Give them food and water. Enough, not too much. An Amaryllis will often grow 6 mo. or longer and a Gladiolus 3 or 4 after flowering. The longer you can keep it growing, the larger and better will be your resulting bulb for next year. The yellowing of foliage will signify the bulb has reached full development. If you do not feed and water your plants, pets, domestic animals and children when they are awake and hungry, they do not thrive. If you know how to make a husband happy (or a wife) you should know how to make a plant "happy." Don't "love 'em and leave 'em," and over-coddling is often as bad as neglect.

Depth and Spacing often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. In a general way, bulbs should be about two or three times their diameter apart. Small bulbs like Ranunculus No. 3 may be covered 1"; bulbs the size of a Daffodil covered 4" to 6". Bulbs with a heavy top need deeper planting to maintain an erect position. Planting in light sandy soils should be deeper than in heavy soils. In very cold climates, deep planting protects bulbs from damage from frost. Few bulbs are too finicky about their depth and many of them have the ability to correctly adjust themselves to the most favorable depth if left in one place a few years.

Alibis. Many amateur growers refuse to accept responsibility for their failures when they result. They blame the bulbs, but not themselves, the weather, their soil or pests. Therefore they do not learn from the best teacher, experience. Luther Burbank said, "A failure is an accomplishment." It is, if you learned by it.

ACID AND ALKALINE SOILS

Most plants thrive in neutral, mildly acid or mildly alkaline soils equally well as they have a wide range of adaptability. But a few require alkaline soils and some will thrive only in distinctly acid soils. In the latter class are included Rhododendrons, Callas and most shade loving plants.

The acid-alkali balance is expressed in pH units. pH 7 is neutral. Below that the acidity increases, above it the alkalinity increases.

Soiltex Outfit. This little testing kit will enable you to determine the pH of your soil. No chemical knowledge is required. Directions for use are included with lists of plants and their preferred pH. Price \$1.00 postpaid.

If soils are too alkaline or if plants to be grown in them require more acidity the best remedy is to incorporate much humus. Peat is most acid usually, though some American peat has become alkaline. Oak leaf mould is more acid than other leaf moulds. Use much leaf mould or peat (preferably imported) for Gladiolus, Callas, Arums, Lilies, Haemanthus, Nerines, Orchids and all plants that require acid soil. It is best to buy peat locally on account of the high cost of transportation. But be sure it is imported Canadian peat with acid reaction. It should be pH 2.5 to 4. Test the peat offered you with Soiltex and don't buy poultry peat.

Canadian Peat. The most acid now obtainable. We can furnish this to local or nearby customers who call for it at \$5.50 per bale. 10 lbs. for \$1.00. Or we will ship by express, f. o. b. for that price. Ask your express agent the cost before ordering as these bales weighed when we received them over 100 lbs. If you want 10 lbs. by mail, ask your Postmaster how much postage to send for a package weighing 12 lbs.

Rootone. We know of really remarkable results from the use of Rootone, a plant hormone powder that induces quicker rooting of cuttings and bulbs and sprouting of seed. As a result of its action, bulbs make a more vigorous root system quickly and thus the flowers are earlier and larger; the foliage stronger and when dormant the bulbs will be found to be larger and with greater increase in number. Coat the base of each bulb, or living roots if any, lightly with Rootone. Dip the end of cuttings into the powder. Tumble the seeds in a jar or in the seed envelope with the powder. When the seeds are coated, roll them out and save remaining powder. Treat your victory garden seed. Rootone will treat from 60 to 300 times its weight of seed and thousands of times its weight of bulbs.

We especially advise its use with spring planted Amaryllis bulbs as at this time the roots are likely to be absent or mostly dried up.

Price. One-half ounce is a good supply. Mailed, postpaid for 50c. Use directions above. We can supply in 1 lb. cans (for extensive plantings) at \$5.00, postage 15c extra.

Vitamin B-1 is a useful stimulant for plants, we believe. We have soaked the roots of Amaryllis in flower in the solution, when transplanting and the flower was uninjured, lasted for days and seeds were ripened. We have used it successfully with other plants in transplanting. Price. **Bottle** of 100 tablets, 75c.

Directions for use, applying only to our own tablets. In transplanting bulbs or any plants, loose roots, dissolve 5 tablets in 1 gal. water. Soak roots in this 15 to 30 min. Pour solution around plant when set.

To stimulate growing plants, for the first application dissolve 1 tab. in 2 gal. water. For succeeding waterings, use 1 tab. to 4 gal. of water once a week.

Warning. Do not soak dormant bulbs in vit. B-1. It rots them.

Information Please. I am always seeking for more and recommend that you do the same. That is why I belong to **The American Amaryllis Society**, (see under Amaryllidaceae) and **The American Horticultural Society**. The latter society publishes the National Horticultural Magazine, four large copies on heavy book paper, per year, which members receive. The topics covered are the entire field, not merely bulbs. The annual dues are \$3.00 per year which you may send to me if you wish.

Bailey's Cyclopedia of Horticulture. This 3-vol. set of over 3,600 large pages

describes almost every cultivated plant. A wealth of culture information is also included. For \$20.00 we will send the complete set, postpaid. Sales tax in Calif. 50c.

BULBS AS POT PLANTS

Bulbs are the most desirable of pot plants and may be easily forced in the living room or kitchen. Their response is much more rapid than that of a recently potted non-bulbous plant because of their storehouse of food and energy in the bulb. The reward is often an outstanding flower in a few weeks. But their desirability scarcely needs any promotion. Our grandmothers grew and loved their potted bulbs. They are more popular today and there is a greater need for them than ever before. Many mothers and wives have written to us that sons or husbands are in the service of their country and that their flowers do more to help them keep up than anything else. One lives with one's flowers, but not always with one's friends and relatives. But it is not only the distressed who need flowers. The gay and carefree are equally stabilized by them.

It is not too late to pot bulbs. Indeed this is the best time to pot the Pink, Yellow and Spotted Leaf Callas. In February one can begin to start Tuberous Begonias and Gloxinias. Fancy Leaf Caladiums require either warm weather or a warm room. We have often started them in May or June.

Now is a good time to obtain Amaryllis bulbs and to pot them. Besides the bulbs already mentioned you may choose for potting any of the following at this time: Agapanthus mooreanus minor; Amarcinum Howardii; Clivia; Haemanthus; Ismene and its hybrids; Elisena; Crinum Cecil Houdyshel and Powellii alba; Sprekelia; Tulbaghia; Billbergias; Cymbidium Orchids and others, as mentioned in their listings.

I have mentioned only the most outstanding bulbs for potting here. Many other bulbs listed in this catalog are also desirable for potting. For that matter one can grow about anything in a pot of appropriate size but I would not recommend a Sequoia gigantea.

Potting Directions

The pot for a 2½" Amaryllis bulb should be about 7" diam. This is about right for most bulbs of that size. Give larger or smaller bulbs, pots proportionate in size. Small bulbs may be planted 2" or 3" apart in pots up to 6" diam.

It is most important that drainage be perfect and the soil of a friable texture that allows water to drain perfectly. Cover the hole in the bottom of pot with reversed bits of broken pots and on top of that small pebbles then coarse sand will help. An imperfectly drained soil often causes bulbs to rot before starting and if they start they do not grow and flower well. Yellow tipped leaves often indicate poor drainage. The pots should be clean and scalded.

The proper soil is a rich sandy loam with the addition of thoroly rotted leaf mould. Add peat or oak-leaf mould for acid loving plants. Use no fresh manure or other fertilizer at planting. Be very discreet even in using old rotted manure. Rotted dairy manure is rather safe. A heaping tablespoonful of bone meal is good. Thoroly mix all ingredients.

Most small bulbs should be planted just under soil surface.

An Amaryllis and most large bulbs may have ⅓ of bulb above surface. When placed, the soil may be settled by a thoro watering, once. After that no more water is usually needed until after growth begins, altho the soil should not become quite dry at base of bulb. A wet condition very long often rots a dormant bulb before they start, or later. The soil surface may appear dry and yet be too wet for starting bulbs at center of pot.

Most bulbs should have a cool room, about 60° while rooting and only slight moisture. When a bud or foliage gives evidence that growth has started, bring the pot to living room temperature, of about 70° and water slightly more. It is not time to water them freely yet. Do that only when flowering or in full growth. Do not overwater at any time. Sufficient time between waterings must be given to allow water

to drain away, evaporate or be absorbed by roots so that air penetrates and bathes the entire root system. This is very necessary to plants and the roots need not be actually dry to permit it. But they must not be water logged. When in full growth and bloom feed the bulbs about every 2 or 3 weeks with very weak liquid manure. It should be only amber tinted, the color of weak tea. Proper feeding will result in luxuriant growth. Too much yellows the leaves, because the root hairs are burned off.

Sun exposure. Note under the listing the requirements for sunlight. For those needing full sun use a south window, uncurtained. For half sun an east window may be just right. If it proves to give too much sun use a curtain. Plants react with certainty to too much sun by the burning of foliage or by spindly growth or too long foliage if not enough. Turn the plants around every few days for symmetry of growth.

It is very important to continue watering and feeding after bulbs are thru flowering. At that time they are rebuilding lost tissues, increasing in size, making offsets and finally constructing new buds for next season. At this time they will also store up food to support the early growth the next year. This is where most amateurs fail in getting results the following year. Some even write and ask me if they should cut off the foliage and dry up the bulbs at once, after flowering. Plants are living beings. They feed, drink, breathe, grow, react to light and heat and die the same as you if not permitted to follow nature's way. If they do not succeed, however, very many blame the bulbs. You will succeed with intelligent care. Blame yourself or the conditions of growth when you have an occasional failure and you will thus learn. There is an element of chance in growing anything, but it is reducible. That makes it interesting. Match your skill against all unfavorable possibilities and learn to overcome them. That is your life problem also. There is a cause for everything. Find it. Give less credit to "luck" and "chance."

ARRANGEMENT OF THIS CATALOG

is by Plant Families, not alphabetically. We also try to group more closely related plants together. Customers approve this plan because of increased information made possible. Only one customer has called for an index. But that is impossible as well as unwise. You need to read all the catalog. Many customers write us that they do; some read it several times. There is information on every page.

In the following lists, the **genus**, (plu. **genera**) is mentioned first. After it, the **species**, (plu. also **species**) or horticultural variety is named. Thus we list *Amaryllis ambigua* or *Amaryllis* "Sibyl Houdyshel," tho it is more botanically correct to say *A. hybrida*, var. *Sibyl Houdyshel*. For the sake of brevity we shorten this. Please note the initial of the genus is used for the second and succeeding species. Thus, the initial *A.* may mean *Amaryllis*, *Alstroemeria*, or *Agapanthus* according to the species listed just preceding.

THE AMARYLLIS FAMILY—*Amaryllidaceae*

This family includes the bulbs from *Agapanthus* and thru *The Alliac*.

The American Amaryllis Society is an association of those thruout the world who grow Amaryllids as an interesting and intellectual hobby. An annual book, **Herbertia**, of about 250 pages is sent to each member. Therein is discussed the best culture methods; descriptions of new species; notes on Amaryllids in their habitat; reports on experiments in crossing, culture, propagation, etc. *Herbertia* is the essential reference book on Amaryllids. Beautifully illustrated.

I invite you to become a member by sending me \$2.50 for your 1944 dues. This will entitle you to a copy of vol. 11, **Herbertia**. The book is ready for the printer and it is hoped that it can be printed soon. But no positive date can be given as many publishers are engaged in the production of war necessities and we must be willing to wait in the confidence that we will have *Herbertia* at the earliest possible date. I suggest you also send \$2.50 for 1945 dues, and vol. 12 of *Herbertia*. Vol. 12 will be published between August, 1945, and the spring of 1946.

Many new members are purchasing the former issues of *Herbertia*. Vol's 1 to 5 inclusive are no longer available. Vol's 6 to 10 may still be had for \$3.25 each but the supply of some will soon be exhausted.

Send us your check for membership and for the *Herbertia* issues desired.

Our *Herbertia* Editor, Dr. Hamilton P. Traub of the U. S. Dept. of Agriculture, is, no doubt, the greatest living authority on all Amaryllids. The Society is fortunate to have his devoted and gratuitous services.

CLASSIFICATION OF AMARYLLIDACEAE

Since the time of Carl Linnaeus, the father of modern Botany, who first arranged plants according to their sexual relationships, many additions to our knowledge have required revision of his classification. Thus the Amaryllidaceae has been thoroly revised, first by Herbert in 1836 and about 50 years later by Baker. But since Baker's work appeared, many botanists have studied Amaryllids. Much exploration has been done in their various habitats. New species have been found and described. The information is tied up in countless monographs and saparata. It needs to be assembled into a new **Amaryllidaceae**.

Dr. H. P. Traub, Editor of *Herbertia*, has undertaken the task and we hope that his book, "Amaryllidaceae," may be completed and offered for sale in this catalog in a couple of years.

For years, we have been preparing you for the changes in nomenclature which will be used in Traub's Amaryllidaceae. This catalog will arrange Amaryllids under these new generic names. Thus **Hippeastrums** will be found under the correct former name of the genus, **Amaryllis**. The former *Amaryllis belladonna*,—which evidently never belonged in the Genus *Amaryllis*, will be listed under the name **Brunsvigia rosea**. **Habranthus**, formerly considered a subgenus of *Hippeastrums*, are not moved to the genus *Amaryllis* but are given generic standing, the genus **Habranthus**.

LIST OF AMARYLLIDS

Agapanthus. The name means Love Flower. Blooms in late spring and summer. Large, most attractive flower umbels on tall, erect stems. Universal favorites in south and easily grown in north in tubs or buckets, wintered in basement. Full sun. Delivery any time, except *Mooreanus minor* and *pendulus*, which are delivered fall to spring.

Agapanthus Africanus, var. **Mooreanus minor**. A dwarf form especially suited to pot culture. Lovely blue umbels on 18" stem. Likes good garden loam, partial shade. Deciduous, but should not be entirely dry over winter. Our bulbs are especially large and fine this year and may not fit our former suggestion of 4 to a 6" pot. But obviously one should use a pot sufficiently large to accommodate the roots and 4 may require an 8" pot. One can shift to garden or plunge the pots, in the spring if desired. They ought to do well in northern gardens if stored over winter in pots of nearly dry soil to keep the roots alive. Price 50c ea. 4 for \$1.50.

A. longispathus. New species. Flowers resemble *Orientalis* but blooms more profusely and is more graceful. 75c ea. 3 for \$2.00.

A. orientalis (umbellatus). **Blue Lily of the Nile**. Our variety is an especially fine one with deep blue flowers on a tall stem. Many flowers are produced in spring and thru summer. 50c. Extra large roots, 75c.

A. orientalis, "Sky Blue." Lovely light blue. \$1.00.

A. orientalis, var. **albidus**. Has pure white flowers. \$1.50.

A. pendulus. Entirely new and distinctly different species of greatest value. Flowers in shades of blue and purple in a great variety. Flowers long, tubular and pendulous when open. The umbel is smaller but most graceful. Like "*mooreanus minor*" it is deciduous and must be ordered before April 1. In the north it can be grown in garden and dug and stored over winter. \$1.50 ea.

Amarcrinum Howardii. A cross between *Brunsvigia rosea* (*Amaryllis belladonna*) and *Crinum moorei*. Flowers are a pure pink and very attractive. As it is a winter

bloomer and profuse it is a valuable bulb for a large pot. It may not flower soon after moving but give best culture and wait if necessary. \$1.50 ea. Larger bulbs at \$2.50.

Amaryllis. Under this genus we are listing all species and hybrids formerly listed under *Hippeastrums*. Amaryllis is the old-time and popular name. They are probably the most popular of all bulbs for growing in pots and equally valuable for southern gardens. They are hardy thruout the south along the Atlantic coast to N. Carolina and even up into Oklahoma they can be grown outdoors in well drained soil, planted about 4" deep and mulched with straw, leaves or brush over winter. But for that we would recommend that you plant only *A. Johnsonii* or the cheaper and usually more vigorous hybrids.

How to Grow Amaryllis In Pots. When bulbs are received, pot at once. Have pots and soil ready to receive them. Do not remove or injure any living roots that are attached. Moisten these roots and dip or sprinkle with Rootone. If there are no living roots, moisten base of bulb after cleaning and apply Rootone. Rootone is not essential but it helps the development of new roots.

A bulb under 3" diam. needs a 6" pot. Larger bulbs should have a 7" to 8" pot in proportion to the size.

The best potting soil is a friable loam. To this add an equal volume of a mixture composed of equal parts of sand, well rotted cow manure and rotted leaf mould. Use no peat. Bone meal is recommended, 1 tablespoonful to each pot. Mix all thoroly.

Pot the bulb with neck and upper bulb surface exposed. Water well but after that keep the soil only slightly moist until growth starts, then gradually increase. When first potted set the bulbs in a cool, light room. The best temperature now is 45° to 50°. Later the pots may be removed to a room of about 60° or 70° which will force more rapid growth and earlier flowers and this is all right when the bulb is well rooted. Buds will usually have shown.

After flowering, the bulbs will then be shrunken and perhaps soft. A period of growth is necessary to fill them out and increase their size. If good growth is made at this important stage the bulb will be much larger than in the preceding year and offsets may be made. It is necessary to keep them growing as long as possible. When the weather is warm outside the pots may be plunged in the garden or the bulbs with entire, unbroken clumps of roots and earth may be removed from pot and reset. Bulbs may be planted in full sun, but slight shade is good where very hot summers prevail. When bulbs are well established give liberal mulchings of dairy manure. Use stable manure carefully. It is good but very strong. If it does not rain every week give a good irrigation. Before heavy frost, remove to house. Allow them a rest of several weeks but do not allow pots to dry out completely. The temperature of 45° checks growth. When you want them to start, bring to 60° and water a little. You can become expert in obtaining flowers every year. In the garden plant Amaryllis just under the soil surface.

I am frequently asked why the inquirer's bulbs do not flower. Perhaps they have flowered the first year after their purchase but not thereafter. Some state their bulbs become smaller each year. These results inevitably follow poor culture. If you give them correct culture, plenty of water and liquid manure when growing well after flowering and keep the growth luxuriant for about 6 mo. or more (as long as they will grow) you will have nice fat bulbs, with a bud or buds formed within for the following season.

When leaves naturally begin to yellow it is a signal that they would like to rest awhile. Some bulbs will continue to have green foliage but one should reduce water to give an early winter rest. Well established bulbs can often be brought into flower in January or even by Christmas. But they should have had a few weeks rest preceding that.

How to judge the quality of the flowers of Amaryllis hybrids. The perfect flower of the Leopoldi type should be at least 5" to 8" across. The petals should be well rounded and broad, overlapping each other, no twisting of petals, and they should form

a wide open, flat flower. The texture should be smooth and firm of good substance. The tube should be short. There should be little or no green in throat but as the species Leopoldi contains considerable green there are few hybrids that do not contain some green. Very few are perfect in any respect.

There should be no dull colors, like brick red. But colors should be bright and of every imaginable tone within the range of this species.

Self colors are desirable to go along with stripes and other variations. But it is difficult to get other than red selfs and these are unusual. A few of our Select Strains are pure red, scarlet rose or pink selfs. But they are few and not separately labeled. Don't order self colors or any colors except as listed. When you are lucky enough to draw a self color you may congratulate yourself that you received a bargain worth 3 to 10 times its cost.

Pure Whites are very rare. They are very expensive and are difficult to grow. Be satisfied to have White Backgrounds, or Sibyl Houdyshel. They are much easier to grow, better bloomers and cost less. The general effect is that of a white flower.

Please note. A few of the varieties and colors listed in our fall catalog are sold out for the present. But I am happy to state that we can offer a few new colors in a very limited number and of course at a slightly higher price than the more common colors. We may not have them next fall.

Amaryllis Species and Hybrids

Amaryllis advena. Oxblood Lily. This species blooms in the fall, Aug. to Oct. There are 5 to 7 or more flowers in an umbel on a 10" slender scape preceding the foliage. There are two color types, dark oxblood red and pink with a lavender tone.

It is not suitable for pot culture but is so nearly hardy that it is grown commercially even in the milder section of Mich. where peaches are grown. In So. Calif. the foliage grows all winter but probably in Mich. it appears in earliest spring. It is recommended for trial in the milder sections from N. J. and from just above the Ohio river, Central Missouri and Kansas to the south.

Culture. Full sun exposure. It does well in very heavy soils or medium loam. As it likes deep planting, it is advisable, especially in the north, to plant 6" deep or more in order to escape freezing. Plant in a protected situation, in colder sections, south of a building, wall or tree and mulch. **Delivery** as soon as dormant about July. Plant as soon as received and begin watering in late July.

Oxblood Red or Pink. Either color, 50c ea.

Amaryllis ambigua. This is believed by some to be a wild hybrid from Costa Rica and not entitled to specific rank. Has been listed as *A. solandriiflora conspicua*. It is a most beautiful Amaryllis. The very tall scape has an umbel of 5 to 8 long tubed, lily like flowers, pure white with pink lines. The effect is most beautiful and a strong aromatic fragrance adds to its charm. Large bulbs \$3.75.

A. hybrids. Select Strains. These are the Leopoldi type, selected from the very best American strains.

Most Amaryllis that are sold are chance seedlings. In Florida and California there are many who grow acres of bulbs. The seed is collected in the field and no selection of parents is possible. The strongest growers, not the most beautiful, produce the most seed.

Judged from the standpoint of a turnip, these seedlings are likely to produce the most beautiful, vigorous and largest bulbs. From the vegetative functions of prolific seed bearing, rapid, vigorous growth and increase they can be sold the cheapest. Dime stores often sell them for 25c. Many very well known and honorable firms handle this grade of Amaryllis. They please many customers. The "beautiful bulbs" will range in price from 35c to 75c each.

Altho these bulbs will produce flowers that please the average inexperienced amateur they are not truly representative of the advancement made in the quality of Amaryllis flowers. To appreciate fully the quality of any flower, one needs experience, study and the best examples for comparison.



SELECT STRAINS AMARYLLIS

these bulbs may be worth from double to several times their cost.

Personally, I have grown Amaryllis continuously since 1898, first as a hobby and later as a business. I have imported bulbs and seeds from the best specialists in England and Holland and made selections from Burbank's originations after a very close study of them all. I am a little hard to please in Amaryllis, but I consider our Select Strains worthy of their name.

This spring we can offer Select Strains in the following color classes and sizes.

Select Strains, Assorted Colors. 2½" - 3" diam. 75c ea. 3 for \$2.00. Per doz. \$8.00.

Select Strains. White Background. The ground color is white variously marked with tones of pink, rose or red. Most of them are near whites and it is from breeding these that a few pure white are produced. 2½" bulbs, 80c. 3 for \$2.25. Per doz. \$8.50. 3" bulbs, \$2.50 ea. 3 for \$7.00. Per doz. \$25.00.

Select Strains. Peaches and Cream. This fanciful name was chosen by an outstanding breeder for this strain, though I doubt whether appropriate as the colors are pastel shades of rose, pink, salmon, red, etc, usually with some white. There are some most unusual colors and a better name might be "Pastel Shades." 2½" bulbs, 80c. 3 for \$2.25. Per doz. \$8.50. 3" bulbs, \$2.50, straight price.

Select Strains. Salmon. 2½" bulbs, 85c ea. 3 for \$2.50 Per doz. \$10.00.

Select Strains. Orange Scarlet. 2½" bulbs, \$1.00 ea. No quantity discount.

Select Strains. Red. A higher percentage of these run to self colors than in other color classes, but it is still a small percentage and these are assorted red tones, every one different. None are specified other than "red." 2½" bulbs sold out. 3" bulbs, \$2.50 ea. 3 for \$7.00. Per doz. \$26.00.

Select Strains. Carmine Rose. Rose shades are the most desirable next to pure white. These have a strong constitution while pure whites are weak. Assembled in this lot are many shades of rose that are not strictly carmine rose altho the parents were

Our **Select Strains**, in contrast with the average amaryllis, are seedlings of selected parents. The parents are not judged as vegetables (nature's process in a large measure) but for the beauty and perfection of their flowers. These parent bulbs are of a quality that would command a price of from \$5.00 to \$25.00 or more per bulb. The parents are grown in greenhouses which exclude insects and the possibility of nature's way of crossing. They are all hand pollinated and study is given to the proper mating of the parents.

The **Color classes** are founded upon the color of the seed parent. Not all come true to this color and these are rogued out at the first blooming. But often a few rogues, or off-colors, escape. Thus our classification is not a perfect one and some off-colors will be found. It is best to buy 3 or more of a color in order to get the nearest to your ideal. But every bulb will give a good flower and be worth the price paid. A reasonable percentage of the bulbs will give very superior flowers and

fine examples of that color. In size, these run from a little under 3" diam. to about 3¼". \$3.00 ea. \$35.00 per doz.

A. Diener's Posthumous Hybrids. These are Diener's latest, grown from his own seed and planted by him. Claims were made for gigantic flowers but we find them little larger than Select Strains and not as desirable. They are Equestre type and as many umbels will have from 5 to 8 flowers (from large bulbs) it may be that by disbudding, leaving only about two to develop they might attain the 12" to 16" diameter claimed. Colors are mostly in Scarlet tones, Salmon, Apricot, etc., but some are near white. Do not specify color ordered. Large bulbs, \$2.50. No quantity discounts.

A. Johnsonii. Sold out for this season.

A. Sibyl Houdyshel. (Burbank origination.) White with narrow pink line on border and flushed deep pink in throat and lower petal. Very fragrant, sturdy grower, rapid multiplier. Jumbo bulbs, \$6.00 ea. No small bulbs sold.

Amaryllis Seed. We are unable to produce enough seed for our own planting. It is far better anyway for you to grow your own seed as that which you buy is often too old. Amaryllis seed should be planted shortly after ripening and drying. One year old seed is unlikely to grow in a good percentage.

Plant Breeding is an interesting science and art. Undertaken as a hobby, it has often resulted in fame. It will involve and develop great skill, ideals of beauty, good taste and intelligence. I suggest you start with our Select Strains. Get a dozen or more bulbs and cross only those you like the best. Cross pollination is easily accomplished by placing the powdery pollen borne by the six stamens on the stigma in the center. The stigma when ready for pollen will be opened into three parts. When the seed pod is ripe it bursts open and may be removed and dried. Plant the seed (soon) in a fine sandy loam containing plenty of humus. Do not use peat. Cover seed about ½". Seedlings may be grown in pots in house or greenhouse where they will continue to grow all year without a dormant interval until they flower; usually this requires 2 to 3 years. In the warm south they can be grown outside under the half shade of lath. But frost usually destroys foliage in winter and cool nights interrupt growth.

Bravoa geminiflora. Mexican Twin Flower. Resembles tuberose in plant and bulb and is closely related. Twenty or more coral red flowers are twinned on a 20" stem. Culture like Tuberose. 40c ea.

Brunsvigia rosea. Synonyms, *Amaryllis belladonna*, *Callicore rosea*. This bulb is familiar in Calif. and many parts of the south as *Amaryllis belladonna*, Naked Lady Lily, etc. I hope you can adjust yourself to this new name the botanists have decided on. There is sufficient evidence that the bulb is really a *Brunsvigia* and certainly it is incorrect to call it *Amaryllis*.

These begin to flower often in late July. The variety **Major** is in full flower in Aug. **Minor** follows soon after. The umbels are many flowered and the flowers are of the most exquisite pink and most entrancing fragrance. They are not suitable for pot growing, as in pots they flower only the first year. But that flower is well worth the cost of the bulb.

It is hardy where winter temperatures go as low as 10° or 12° above zero. That limits its culture to the south, and along the coasts to N. Carolina and the state of Washington.

Time of Delivery. These are usually ordered in the fall. As the result of such late



**AMARYLLIS
SIBYL HOUDYSHEL**

planting they do not always flower the first year. If they do flower, they do not have a sufficiently long season in which to form new roots and flower the second year. It is better to order before June 1. Thus we will deliver before Aug. 1. If you plant as soon as received there is not likely to be an interruption in the production of flowers.

Culture. Work the ground to a depth of 10". Plant with top of bulb covered about 2". In dry climates, begin to water in late July and continue until foliage dies in June. Full sun or slight shade.

Brunsvigia rosea, major. Pure pink, 40c. L. 50c. Jumbo 80c.

B. rosea, minor. Later to flower. Pink with lighter throat. 65c.

B. rosea, var. "Ethel." This name will be abandoned when we find the correct one. Dark coral rose with white throat. Late blooming. One of the most beautiful. \$2.00.

Chlidanthus fragrans. Golden yellow flowers in spring. Entrancing, spicy fragrance. Three or four flowers in an umbel on a 10" scape. Plant 3" deep, in full sun.

Altho cheap, this is one of the most desirable bulbs for southern gardens. In the north it can only be grown in pots. It should be potted as soon as received but start it into growth slowly. 25c ea. \$2.00 per doz. Planting stock, small bulbs, some of which may flower, 50 for \$2.50. 100 for \$4.25 postpaid. Gardeners in the south should order these.

Clivia. Altho easy to grow and to flower by the amateur, they will always be classed with the aristocrats of flowering bulbs, because the flowers easily place them there. They increase so slowly by division that the chief method must be thru the freely produced seeds. But Clivias require at least five years and usually seven, to flower from seeds. This time involves expense. They can never become very cheap.

Clivias have evergreen, strap-like foliage somewhat resembling that of Amaryllis.



CLIVIA, RECENTLY RECEIVED,
BUDDED PLANT

The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart and in garden under Avocado (evergreen) trees. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well supplied with water after flowering, all summer and fall. Liquid fertilizer, occasionally, helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperature of about 40° to 50°. Pots should be 8" for a small plant up to 12" for larger. Drainage must be perfect. Potting soil is described under "General Culture Directions." pH 7 is about right.

Please note. One cannot guarantee Clivias to flower the first year after moving tho they usually do. The only sure way to have one that will flower in 1945 is to add 75c to the price of the plant ordered and ask us to send the plant when budded next March. The extra cost of labor to pack, packing material and postage for a budded plant is now about that much. Do not order budded plants of the \$1.00 size "miniata" or the \$2.50 size of "miniata hybrids."

Lack of Labor this year has prevented us from perfectly controlling the snails. As a result the Clivia foliage will be somewhat imperfect. Our method of ground culture produces strong vigorous roots and plants that will replace the faulty foliage and produce specimen plants in pot culture.

Clivia miniata. Wide open flowers of soft yellow orange. Flower earliest, late Dec. to Mar. 1. Hardest and easiest to grow. Small, \$1.00. Large, \$2.00. The latter is more sure to flower the first year.

C. miniata hybrids. Similar to the species "miniata" in foliage, hardiness, wide open flowers, etc., but there is some variation in color and form of flower. Most of them are in light orange tones. A few are dark and a few have a white throat. Do not express your color preference for any Clivia hybrids as we cannot tell the color from the plant. **Special Prices:** Small plants that should bloom in one or two years, \$1.00. Small, possibly blooming size, \$2.50. Med. \$3.00. Large, \$3.50.

C. nobilis hybrids. None for sale until fall.

Cooperia pedunculata. Texas Rain Lily. Close to Zephyranthes but larger. Lovely white flowers appearing after rains in summer. Hardy except in far north. In central sections it may be planted to 6" deep for frost protection. It may be dug and stored over winter in north. 25c. \$2.50 per doz.

Crinums. Species of this large genus are native to every continent. They are most attractive plants for their foliage alone and with their fragrant, lovely flowers they are indispensable for southern gardens, for the landscape effect among shrubs and trees. The flowers are useful for cutting and many florists use them.

Culture. The species Longifolia is hardy in milder sections of the north. There it should be planted quite deep in a protected place and mulched over winter. C. Moorei and the hybrids derived from longifolia x moorei, Cecil Houdyshel, Powell, etc., are only a little less hardy. Any Crinums, except tropical sorts, should be hardy in the middle south where Amaryllis belladonna can be grown. In the north, even the largest sorts may be grown in an 18" tub and wintered in a basement.

While Crinums prefer a deep rich loam, most do well in heavy soils. All appear to do better with slight shade but with the exception of C. moorei, Virginia Lee and Gordon Wayne, they do very well in full sun. C. moorei, etc., must have considerable shade.

Crinum Americanum. Native to Southeastern U. S. The species is variable and some forms do not succeed well away from their native swamps. We offer a form long grown in California, that does exceptionally well. Flowers blush white. Increases by underground stolons, soon making a large clump. 50c.

C. campanulatum. Belongs to the "Milk and Wine Lily" type. That is, the flowers are white with a bright rose stripe thru center. \$1.00.

C. Cecil Houdyshel. Flowers, deep rose pink. One of the best hybrids, all qualities considered. It is the same cross as C. Powell but is much larger, more robust and instead of flowering in but a limited period it is almost a perpetual bloomer. Large bulbs often produce 7 or more flower scapes in a year, the most profuse of all. Small bulbs, \$1.50. Good blooming size, \$2.00. Jumbo bulbs weighing several pounds, \$3.50.

C. Ellen Bousanquet. Most outstanding. It is most surprising to see a Crinum with such dark, glowing wine red flowers. Very vigorous and easy. Jumbo, \$1.50. Large, \$1.00. Medium, 60c.

C. erubescens. Milk and Wine type. The center stripe is red-purple. 50c. Jumbo, \$1.00.

C. H. J. Elwes. Pink flowers of unusual beauty. \$2.50.

C. kirkii. One of the most desirable of "Milk and Wine" type. White flowers with red center stripe. The large umbels have many flowers open at one time. 75c ea. Per doz. \$7.00. Jumbo bulbs, \$1.25.

C. longifolia alba. (Syn. *Capense alba*.) White lily-shaped flowers. This is the hardiest species, surviving the winters with protection if planted deep, as far north as Ohio. Better than "rosea." 50c. \$4.00 per doz.

C. longifolia rosea. Pink flowered form. 60c.

C. Louis Bousanquet. Very free flowering thru an unusually long season. Pink flowers on a very tall, erect peduncle. \$1.00.

C. moorei. Large pink, bell-shaped flowers in the fall, freely produced. The long neck of the bulb surmounted by rotated leaves give the plant great decorative value. Requires shade. Nearly as hardy as *longifolia*. 50c. Jumbo bulbs, \$1.00.

C. powelli alba. Extra fine pure white. One of the most valuable and beautiful *Crinums*. 50c ea. Per doz., \$4.00. 25 for \$7.50. Jumbo, \$1.00 ea.

C. Virginia Lee. (Our 1934 introduction.) Large pink flowers with white throat. A second generation hybrid produced by the cross Cecil Houdyshel x J. C. Harvey but reverting in many characters to its ancestor on both sides, *C. moorei*, in its necessity for shade, heavy seed production and mid-summer loss of foliage. These characters are also shared by its seedlings, Gordon Wayne and many not named. Price \$3.00.

Elsiena longipetala. Very rare and lovely Peruvian amaryllid. It is related to the *Ismene* but the pure white flowers are far more delicate and graceful and quite distinct in form. Culture like *Ismene*. It can be forced in pots or grown in the garden in summer. Bulbs stored over winter like Glads. It is hardy in the middle south. \$3.50 ea.

Habranthus. This was formerly considered a sub genus of *Hippeastrum*, but upon changing the generic name from *Hippeastrum* back to the original *Amaryllis*, botanists have wisely given the *Habranthus* their proper generic standing. They usually have a one flowered umbel.

Culture is very much the same as for *Amaryllis*. Most of them are hardier and probably all could be grown in pots. Some are winter growers, others are summer growers, still others are evergreen.

Habranthus andersonianus. Deep yellow flower, bronze on reverse, in the fall before foliage appears. Winter growing. Small bulb and plant, with flower about 1½" across on top of a 10" scape. About as hardy as *Brunsvigia rosea* and as far north as Okla. Delivery when dormant in summer. 35c ea.

H. andersonianus, var. **Texana.** A smaller plant, narrower foliage, but much like the type variety. Both varieties may be planted very close, in full sun. They are very free flowering and every time it rains or you water them, in the flowering season, a new crop of flowers appears clothing the bed with a rich gold carpet. Both grow easily from self-sown seed. 35c ea.

H. brachyandrus. Long tubular flower like *H. robustus* but much larger and deeper, more richly colored, shades to a deep purple in throat. Not winter hardy except in far south. Delivery any time but early spring is best. \$1.00. Largest, \$1.50.

H. robustus. Properly named. A robust grower. Like *H. brachyandrus* but flowers are a lovely tone of lilac pink and it is more hardy, nearly evergreen, more profuse in growth. Seeds itself freely. M. 15c. Large 25c.

Haemanthus. This south African genus is very rare in cultivation. Very few have ever seen one. They are hardy only in an almost frost-free climate like So. Calif. or Florida. In their habitat, the following grow in cool, moist forest glades where there is little sun but plenty of light and where light breezes keep the air in motion.

Culture. They should be grown in pots except in climates like Florida and So. Calif. The soil should be equal parts of loam, coarse sand and peat or leaf mould made thoroly fine. Drainage should be perfect. A tablespoonful of bone meal to each plant is useful. The species listed here require cool shade, little sun, but light. An abundance of water at all times when growing is required but rather on dry side during late winter dormancy. But not bone dry. When bulbs are received pot at once and water.

Do not water much before growth starts. Altho a little warmth favors earlier growth and flowers it may be easily overdone.

Haemanthus Katherinae. The bright red flowers fill a large rounded umbel often 10" or more in diameter. I have counted nearly 125 in an umbel, the broad banana-like foliage droops gracefully into an umbrella form. Scarlet seeds follow the flowers. A plant in flower is an unforgettable sight of tropic beauty. The entire plant is of quite large proportions, the foliage and flower umbel reaching a height of 30" to 36". Introduced from Natal in 1877 they are yet rare. There are certainly not many hundred in the United States.

There is a short dormant period between January to March. That is the only time they can be moved. We have only a few bulbs for \$10.00 ea. These should have a 12" to 16" pot.

H. multiflorus. Not exactly a smaller edition of Katherinae but smaller and much like it. The umbel is nearly as large, composed of 60 - 100 blood red flowers. It is said that plants in bloom have sold for \$25.00 in flower shops. The bulbs have a little longer dormant period but should be ordered early, not later than March usually. Give them a 10" to 12" pot. Blooming size, \$3.00. Larger bulbs for \$4.00. Larger size is more sure to flower.

H. puniceus. Small, evergreen plant, very easy in culture in a pot or under a tree. Hardy to 28°. Very pretty foliage. Small umbel of scarlet flowers, on 12" mottled stem in late winter to early spring. Decorative red fruits. Delivery any time of year. \$2.75. Does well in half shade.

Heimerocallis. Daylily. The flowers range in color from dark bronzy red, thru pastel tones of pink to orange and yellow. They are borne on a branching scape well above the foliage.

The Greek name, meaning "beautiful for a day," refers to an individual flower. But these are so freely produced, thru a long period, that "beautiful every day" would be more apt, as a collection of several sorts show masses of flowers thruout the spring, summer and fall and here we often have some winter flowers. Today, Dec. 23, 1944, we have many Daylilies blooming. The modern sobriquet of "The Perennial Supreme" is well deserved.

Culture. While their beauty is their greatest recommendation, their easy culture and hardiness adds to their desirability. They will succeed where any plant will succeed. I have known abandoned plants here, where we have arid, hot summer, to persist for years. But that must not be their fate. They grow well in full sun. Slight shade is even better. If given constant moisture about their roots, preserving this and coolness of the earth with a good mulch, the plants are ideally situated and respond with generosity. They are hardy even in severe winters in the north. They are fibrous rooted, not bulbs, and must be planted at once when received. Altho they can be moved any time, it is better to ship from late fall to early spring.

In these war times, when it is difficult to get labor for **maintenance** of extensive gardens and landscaping, one solution is to plant Daylilies extensively. They are an



HAEMANTHUS KATHERINAE

almost perfect border or landscape plant, never have to be dug and replanted. All that you must do for them is keep the weeds down and water. They will even choke out most of the weeds. A heavy leafy mulch helps every way.

In spite of our lack of sufficient labor to give ideal care to our Daylilies, (they had weeds hoed out only once or twice last summer) our plants have thrived and increased so well that this spring we are able to make some startling reductions in our prices.

In **Daylilies**, the sepals are colored and petal-like and are an essential part of the floral display. Approximate flowering dates are indicated.

Araby. Bronze on gold dust effect give a pleasing and unique pastel tone. \$5.00 ea.

Calypso. Large, fragrant, lemon yellow flowers from June to Aug. 3½ ft. tall. 30c ea. \$2.50 per doz.

Cinnabar. Bronzy rose-yellow color. 75c.

Crown Prince. Like Mikado but more free flowering. May - Aug. 20c ea. \$1.75 per doz.

Dauntless. Cadmium yellow, greenish throat, delicate fulvous red in center of petals. 2½ ft. June - Aug. A favorite. \$1.00 ea.

Florham. Old popular hybrid. Large deep yellow. May - July. 50c.

Florida. Pastel effect of light chrome and rose in a 5" flower. \$4.00 ea.

Kwanso. The double Orange Daylily. 20c, 3 for 50c. 8 for \$1.00. \$1.25 per doz.

Linda. Petals, ruffled golden yellow flecked with cinnamon and a rose zone. Sepals lighter, pure yellow. May - July. \$1.50.

Margaret Perry. Brilliant orange-scarlet. Tall. July - Aug. 35c.

Mikado. Orange with dark red zone. Popular. 3 ft. May - July. 30c.

Patricia. Clear deep yellow, beautifully formed flower. Fragrant. \$1.25.

Radiant. Rich orange. June - July. 50c.

Rosita. Carmine-crimson with copper-red tones. 5" flower. Slight shade is better. \$4.00.

Serenade. Gay rosy fulvous red markings on creamy apricot. \$2.50.

Sibyl. Dark purple-red petals with lighter sepals. \$4.00.

Soudan. Lemon yellow. Broad wavy petals. June - July. 50c.

Vesta. Deep orange with gold sheen. May - July. 50c.

Vulcan. Large flower, darkest maroon red. Rare. \$1.50.

Hymenocallis. True Spider Lilies. Many botanists have included the *Ismene* in this genus but this is not accepted by the better recent botanical writers, therefore we shall list *Ismene* as a separate and distinct genus as evidently they should be.

Hymenocallis sp. unknown. Tropical Spider Lily. This appears to me to be the same as *H. rotata* and *H. tenuiflora* and these names must have been given to the same species. The flowers have long narrow petals and long stamens which give a spidery appearance. This species has immense pure, snow white flowers that are exquisitely fragrant. As a pot plant it is a fine companion for *Amaryllis* and requires about the same culture practice except that it can be kept evergreen. **Culture.** This tropical species can be easily grown outside anywhere that an *Amaryllis* can and with the same culture. Plant 4" deep. Full sun or slight shade. In the north it can be grown in the garden in summer and dug and stored over winter, covering large roots with soil. The most satisfactory way is in pots. Flowers much more profusely the second year. 50c. Largest, 75c.

Ismene. Specially Priced

We have an immense crop of these this year and have decided to let our retail customers have them on quantity lots at wholesale prices, and plus cost of postage and expense of packing on the smaller quantities. The **Ismenes** are very desirable cut flowers and add exquisite fragrance to their white beauty.

Culture. They can be grown anywhere in the U. S. in the garden. In the north they can be planted 6" deep and remain in the ground with a mulch protection over

winter, in the milder sections where winter temperatures seldom touch zero. In colder sections, dig bulbs in the fall and store like Glads. **Storage temperatures** are important. They will take a lot more cold in the ground than in storage. Store in a warm room, not a cold one. The storage temperature should not be under 55° or 60°. 70° is much better for flower production the following season. Most of the rotting of bulbs in storage results from chilling. I have found no advantage in leaving old roots attached.

Ismene calathina. The Peruvian Daffodil. Large white flowers, veined green with a daffodil-like cup. Large, 30c ea. Per doz. \$2.50. For 100 or more bulbs, price \$12.00 per 100, f. o. b. by express. **Planting stock.** Small bulbs for \$1.50 per 100, or assorted sizes, some of which may flower, \$4.00 per 100, all express, f. o. b.

I. calathina, var. Advance. A much improved form with larger bulbs, larger and whiter flowers on a taller scape. Jumbo bulbs, \$1.00. Large flowering size, 75c.

I. calathina, var. festalis. An Ismene-Elisena cross of great beauty. Pure white and very graceful. \$2.75.

I. calathina, var. festalis Triumph. Improved "festalis." \$2.00.

I. calathina, var. Olympia. The largest Ismene. Cream to light yellow. \$3.25.

I. calathina, var. Sulphur Queen. A cross of I. calathina and I. amancaes. Sulphur yellow, very deep when it first opens. \$1.25.

I. macleana. Our smallest Ismene. The bulb and plant are a little smaller than I. calathina and produce several slender 12" scapes with diminutive Ismene flowers that are nice in arrangements. Rare. 60c.

Special. One of each of the Ismene except Festalis and Olympia, 5 different sorts for \$4.50. A really good buy.

Leucojum aestivum. Snowflake. This species is much better than "vernum." Hardy in north. Blooms very early, often before snow is gone. Dainty white, pendulous bells, each petal tipped with green dot. Plant 4"-6" deep. 10c ea. 75c doz. Delivery in summer when dormant.

L. sp. unknown. Larger and more bells in an umbel. 25c ea. \$2.50 doz.

Lycoris. Fall blooming amaryllids of highest garden value but not suitable for pot culture. In pots, they flower the first year but not thereafter. L. squamigera, (or Amaryllis Halli) and L. purpurea are perfectly hardy in the north. L. radiata is hardy as far north as Tenn. We are often asked for white Lycoris. There are very few in America and probably no commercial stocks. We have a few (none for sale) of L. albiflos and another sent from Japan as L. alba. The latter name is probably incomplete. Neither are pure white. L. incarnata, described as pure white by writers in Flower Grower, is flesh colored with red markings. Not white at all. This explanation is written to avoid correspondence on the subject.

Delivery of Lycoris in summer.

Lycoris purpurea. The brilliant blue and purple markings on the flower make a startling effect. \$3.00 ea.

L. radiata. Red Spider Lily. One of the south's most outstanding garden bulbs. The flowers, appearing in Sept., are bright coral red. 35c ea. \$3.00 per doz.

L. squamigera. Amaryllis Halli. The hardy amaryllis that grows so well in the north. The general appearance is much like Brunsvigia rosea (Amaryllis belladonna) except that the flowers are lilac pink. \$1.00 ea.

Nerine. This genus is seldom seen in America, altho it is one of the most beautiful and varied of the Amaryllids. Formerly Lycoris radiata, Red Spider Lily, was mistaken here for Nerine sarniensis and the error persisted for probably 40 years or longer. The influence of this error may still disguise the true Nerines.

Nerines bloom in succession from Aug. 1 thru Jan. They are hardy only in the south where temperatures seldom go under 26°. But they are one of the finest pot bulbs. **Culture:** Pot or plant in mildly acid soil. Sandy soils are more likely to be acid and drainage is better. Use peat or leaf mould to bring soil to pH 6 or 6.5. Alkaline

soil is the most frequent cause of failure. Pot bulbs at once with bulb well covered and 2" to 4" deep in gardens. Full sun. When foliage yellows withhold water but be sure they have made a vigorous growth.

Nerine Bowdenii. 10 or more flowers in an umbel 9" wide on a 15" scape. The finest of all and of easy culture. Do not rot easily if sometimes watered during their shorter dormant period. Delivery Jan. to July, sometimes later. \$1.00 and \$1.50 ea.

N. Bowdenii, Pink Beauty. Larger and finer. Spring delivery. \$5.00 ea.

N. filifolia. Lovely small Nerine with evergreen thread like foliage. Carmine pink flowers on 12" stem. A dozen bulbs may go into a 6" pot. Bloom in Sept. Delivery, any time. 15c ea. \$1.00 doz.

N. fothergilli hybrids. Exquisite Nerines from red to pink tones. Ideal for pots. Summer delivery. \$1.50 and \$2.00 ea.

N. massonorum. Earliest, often mid-July. Foliage like *N. filifolia*. Flowers resemble it but smaller, on a shorter scape. Very long spathe. Delivery any time. 50c. ea.

N. rosea-crispa. Hybrid of *Filifolia* but larger in all parts. Can be kept evergreen or dried off. 50c ea.

N. undulata. Rose pink. Petals with crisped edges. Summer delivery. \$2.00.

Pancratium maritimum. Very fragrant pure white flowers in shape like an *Ismene*. Bloom late summer to fall. **Culture.** Plant 4" deep in a sandy soil. Tender tropical bulbs. Not recommended for pots. 25c ea.



SPREKELIA FORMOSISSIMA

Polianthes tuberosa. Tuberoze. Pure waxy white flowers on a 24" stem. Rich spicy fragrance that perfumes the entire neighborhood. Plant 4" deep in full sun. In the north, one must dig and store bulbs in fall. Assorted varieties of single, double and variegated leaf. 25c per clump. Per doz. clumps, \$1.00.

Sprekelia formosissima superba. The Orchid Amaryllis. Dark crimson flowers in orchid-like form. Twice as large as the common type, better color, more floriferous. We have flowers in the field all the year but heavier crop in spring. A fine bulb for pots. Culture like *Amaryllis* except one can keep it growing all winter. Evergreen foliage. Jumbo bulbs 75c. Large 50c.

Sternbergia lutea. A winter growing, bright yellow *Amaryllid* often called "Fall Crocus." Most desirable. Hardy in middle south. **Culture.** Plant 3" deep. It should be moved as soon as dormant in late spring or early summer as they usually flower too early in the fall for fall planting. Extra jumbo bulbs, 50c. L. 35c. Blooming size, 25c. Summer delivery.

Zephyranthes. Fairy Lilies. The smallest *Amaryllid*, 6"-12" tall. Fine in beds or borders. Hardy in middle south. In north dig and store. They may be grown in pots. Give acid soil, sandy loam with leaf mould.

Zephyranthes ajax. Hybrid. Flowers, cream to dark yellow. 25c ea.

Z. candida. Often called white Crocus. Best pure white. Evergreen. Very easy. Flowers profusely giving a bed with a snow white coverlet from mid-summer to early winter. Special. 3 for 10c. 40c per doz. 100 bulbs for \$2.00. 500 bulbs for \$7.50. 1000 for \$12.50.

Z. grandiflora. Often listed as rosea or carinata. Pink. The largest Zephyranthes. 15c ea. \$1.00 doz.

The Alliae. This group is now placed in the Amaryllis family. Sandy loam is preferred. Do not add too much leaf mould and no peat as very acid soil is not so good. Plant about 2½" deep. The species Allium are onions and should be grown in full sun unless noted.

Allium Schoenoprasum. True Chives. Lovely little plants with lavender flowers, used for edgings in the flower or herb garden and add zest to salads, stews, etc. 10c ea. 4 for 25c.

A. senescens. Erect strap shaped leaves. Deep lilac flowers in a dense globular umbel. Very fine bloomer. 20c ea. 3 for 50c.

A. tuberosum, Oriental Garlic. A pretty Allium with white flowers. An ornament in the garden, indispensable in the herb garden. Leaves give a most delicious flavor to salads without the long-lasting high-powered after effect of garlic. In north, winter the plants in pots. They would probably grow in pots in the window all winter. Plants 25c per small clump.

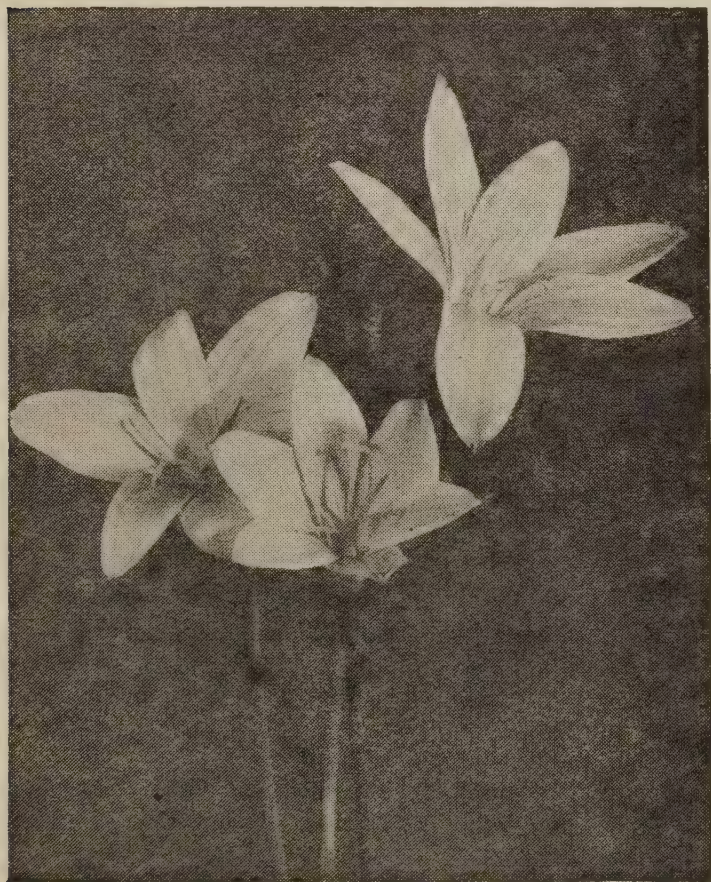


TULBAGHIA VIOLACEAE

Tulbaghia violaceae. Small cousin to Agapanthus. Mauve flowers produced throughout the year, a true perpetual bloomer. Foliage has garlic odor if bruised. An acquisition for pot culture. 35c. 3 (for a 5" pot), \$1.00.

MOTHER'S DAY

Birthdays, Anniversaries, even Dad's Day, Christmas and in fact any day is a suitable time to give presents. Flowers are always preferred. Candy only appeals to the physical senses, often harms the recipient's health. But flowers are a delight to one's soul. Even Mohammed would have sold half of his last loaf of bread in order to buy a hyacinth. For such occasions grow as many potted bulbs as possible, several Amaryllis, Callas, Oxalis, Tuberous Begonias, Gloxinias, Fancy Leaf Caladiums or any of those recommended for pots and listed in this catalog. Cut flowers are always desirable but soon fade. Bulbs serve the same purpose and last for years.



ZEPHYRANTHES GRANDIFLORA

IRIS FAMILY—Iridaceae

The Iris is the type plant of this family which includes the Gladiolus and many others that are listed in our fall catalogs.

Tall Bearded Iris. For many years we have been a source for these at the most reasonable prices to be found. But they have been offered in a brief leaflet, only to those who requested it. Consequently many customers know little about our Iris. We want all to try the newer, better Iris and so we present the full list here. No other price list will be sent out this year.

Culture. Iris may be moved at any time of year, when weather permits digging and replanting. The best time is soon after they are thru blooming. That is May - June in this climate. You may order at once and we will send them now or if you so specify we will send them after flowering.

Culture is most easy. Plant with roots spread out and rhizomes barely covered. They may be spaced 1 to 2 ft. apart. Give full sun exposure. They prefer heavy soil but do well in sandy soil. Neutral, pH 7 to mildly alkaline, pH 7.5 up is best. They should receive plenty of water until mid-Aug. About that time or a little later let them dry or bake. They need a hot-dry baking period of several weeks in order to flower well the following spring. Lacking this or when too crowded, too much shaded or as a result of poor culture at proper growing period, few flowers may result. Avoid use of manure or other fertilizers except wood ashes.

Definitions. *Plicatas* have white ground color, often tinted and with deep contrasting color flushing and bordering this, in fancy "stitching" or in dots and dashes. *Blends* have several colors deliciously blended and iridescent. *Bicolors* have upright petals or standards (S.), and falls (F.) in different tones, the standards lighter. *Variegatas* have S. yellow to bronze and F. in red to maroon.

- Alta California.** 48". Deep yellow, perfect in form. 20c.
- Ambassadeur.** 42". S. red violet; F. purple maroon. Late. 15c.
- Arcadia Blue.** Pale blue. Blooms profusely early, late and in fall. 15c.
- Attitash.** Variegata. S. yellow, citrine and violet, blend. F. violet blend. 20c.
- Beau Sabreur.** Variegata. S. amber; F. velvety Vandyke red. 30c.
- Blue and Gold.** Blue. Deep gold beard. 20c.
- Blue Beard.** Better, deeper blue than parent (Crimson King). Fall bloomer. 25c.
- Blue Velvet.** 46". Intense, deep velvet blue. 25c.
- Boadicea.** Yellow and pink blend, flushed sky blue in center of F. 25c.
- Buechley Giant.** Perfectly formed, massive blue flowers; very tall. 25c.
- California Blue.** 60". Rich blue violet with glowing orange beard. Long blooming season. Deliciously fragrant. 20c.
- California Gold.** Tall. Large deep yellow. One of the best. 35c.
- Canyon Mists.** 40". Pink mauve self colored. Beautiful. 15c.
- Cecil Houdyshel.** Tall plicata. Ground color white, heavily flushed and feathered lavender. Hardy everywhere. 15c.
- Claridad.** 30". Best, true-blue iris. 20c.
- Coronation.** 36". Fine, large, deep golden yellow. 15c.
- Cucamonga.** Tall velvety blue-violet. Best qualities of Dominion and Mesoptamica. 25c.
- Delight.** Tall, pink and white plicata. 15c.
- Depute Nomblot.** The perfect iris. S. copper. 25c.
- Desirable.** Very striking white and purple. 25c.
- Dolly Madison.** 36". Large flowers blended mauve and yellow. 20c.
- Don Quixote.** 42". Large, blended violet and brown. 15c.
- Druid.** 36". Red maroon and brown. 20c.
- Duke of Bedford.** 34". Deep red violet. 15c.
- El Capitan.** 40". Manganese violet. Largest and finest. 20c.
- Eleanor Brooks.** Phlox pink and yellow plicata. Small lovely iris. 15c.
- Eleanor Roosevelt.** Dark purple. Free fall bloomer. 15c.

- Fairy.** Lovely white and blue blend. Honey locust fragrance. 20c.
- Francheville.** 54". S. fawn, tinted lilac; F. red purple, edged heliotrope. 25c.
- Gaviota.** Fine cream white, edged yellow. 15c.
- Golden Cataract.** Deep golden yellow. Most profuse bloomer of all. Here it ceases only in mid-summer and mid-winter. 50c. Three for \$1.00.
- Gold Imperial.** 33" Deep yellow. Fall bloomer. 15c.
- Happy Days.** Our largest, tallest yellow. Most desirable. 40c.
- Indian Chief.** Huge, brilliant red tone, perfect form, free flowering. 25c.
- King Midas.** Bicolor. Blended golden buff and garnet brown. 25c.
- Lentz Schnee.** White, tinted lavender. 15c.
- Los Angeles.** Tall, large plicata. Snow white, edged blue. 15c.
- Loudoun.** 30". Yellow, lined and dotted with chestnut. 20c.
- Louis Bel.** Pansy violet and violet purple. 25c.
- Mabel Taft.** Giant blue bicolor. 25c.
- Mary Barnett.** 42". One of the best light blues. 20c.
- Mary Geddes.** Blended soft pink and Pomeranian red. Dykes Medal. 20c.
- Mary Gibson.** 42". Early. Bronze, blended yellow. 25c.
- Mary Senni.** S. lilac flushed red brown. F. violet and lilac margin. 20c.
- Mauna Loa.** Tall and conspicuous. Reddish flowers. 30c.
- Melchoir.** 36". S. bronze velvet, F. velvety crimson violet. 6 inch flower. 20c.
- Messaline.** 38". Very large. Red brown and red violet blend. 15c.
- Mildred Presby.** 30". S. creamy white; F. velvety pansy violet, in striking contrast. 20c.
- Mirasol.** Bright deep chrome yellow. Fine form. 30c.
- Mme. Cheri.** Large pink and violet blend. 20c.
- Mme. Durand.** Tan and mauve blend. 25c.
- Moneta.** Tall, red purple and violet bicolor. Off season bloomer. 25c.
- Ningal.** Magnificent blend of pastel shades in rosy buff. Hay's lilac to white with bright yellow in throat. 35c.
- Numa Roumestan.** 36". Intensely red. 15c.
- Pacific.** 36". Gigantic deep blue. A magnificent early iris. 25c.
- Pale Moonlight.** Very pale blue. 35c.
- Persia.** Bright blue blended with smoky blue, like a Persian rug. Fragrant, massive. 20c.
- Picador.** Variegata. Gold and red brown. 25c.
- Pres. Pilkington.** 40". S. vinaceous buff over old gold. F. soft violet edged silvery brown. 15c.
- Purissima.** 44". The most perfect white. Gigantic flowers. 15c.
- Querida.** 42". Blended pastel tints, mauve to white. Fragrant. 15c.
- Red Dominion.** Deep red. One of reddest. 30c.
- Red Ember.** Very striking bicolor. S. pink. F. velvety crimson. 25c.
- Rialgar.** 22". Deep buttercup yellow and bronze. Very showy. 20c.
- Rose Madder.** This unique color. 20c.
- Rosultra.** 40". Early, bright rose. Fine garden effect. 20c.
- Sacramento.** A giant plicata like San Francisco but edged red purple. 25c.
- Sandakan.** Tan and purple bicolor. 20c.
- San Francisco.** 44". Finest, largest plicata. Lavender blue on white. Dykes Medal. 15c.
- San Gabriel.** 60". Pink lavender. Extra fine. Too early for east. 15c.
- San Luis Rey.** 38". Large red purple. 15c.
- Santa Barbara.** 40". Finest lavender blue. Very large, perfect form. 15c.
- Sequoiah.** 36". Reddish color. F. margined lighter. 20c.
- Shasta.** 40". Gigantic snow white. Perfect form. Early. 15c.
- Sherbert.** Old gold and brown. 15c.

Sierra Blue. 50". Clear soft blue. Enormous flowers on well branched stems. Perfection. Dykes Medal winner. 35c.

Sir Michael. 48". S. clear lavender blue; F. red purple suffused copper brown. One of the world's best iris. 25c.

Souv. de Mme. Gaudichau. 36". Dark velvety blue purple. Fine form, early and fragrant. 15c.

Sunset Gold. Medium size, yellow. F. reticulated violet. Fall bloomer. 15c.

Susan Bliss. 40". Magnificent pink toned iris. 20c.

Tenaya. Dark red-purple. Very outstanding. 40c.

Thos. R. Bacon. Soft ivory yellow blended gray to violet in center of falls. Very attractive. 25c.

Valor. Blackish blue-violet bicolor. Large, rich, fine. 20c.

Wonder Child. Very large, deep pansy purple. Magnificent, profuse bloomer. Best dark iris. 30c.

Yves Lassilly. Very large white, suffused sky blue. 20c.

Yvonne Pellitier. Pallid blue-violet blending to light violet. 20c.

Iris Collections. No. 1. One each of Mauna Loa, Mirasol, Ningal, Canyon Mists, Cucamonga, Depute Nomblot, Happy Days, Los Angeles (or San Francisco), Purissima (or Shasta) and Pacific. Ten varieties, all labelled. List value \$2.50, for \$2.25.

No. 2. One each of Mme. Durand, Thos. R. Bacon, Red Embers, Blue Beard, Buchley's Giant, Sacramento, Desirable, Picador, Claridad and Attitash. Ten varieties value \$2.40 for \$2.15.

No. 3. One each of Mary Geddes, Pale Moonlight, Sir Michael, Indian Chief, Mme. Cheri, Loudoun, Arcadia Blue, Golden Cataract, Eleanor Roosevelt and Blue Beard. This collection contains several fall bloomers. Ten varieties, value \$2.60 for \$2.35.

No. 4. One each Indian Chief, California Blue, Alta California, Quirida, Pres. Pilkington, Numa Roumestan and Purissima. Seven varieties, value \$1.25 for \$1.10.

No. 5. Includes collections Nos. 1, 2, 3 and 4. Thirty-seven varieties all different, labelled. List price, \$8.75. If bought separately, the collections would cost \$7.85. Price of all four collections \$7.50.

We reserve the right to substitute equal or better sorts and values if we run out of any. However, it seems unlikely that we shall. **Remember.** Iris do not flower from recently planted rhizomes. You gain nothing by planting before the 1945 blooming season is thru. For best success we advise you to file your order, with remittance, early and ask for delivery when thru flowering. Delivery also thruout summer and fall.

Evansia or Crested Iris

Iris Nada. (Giridlian) A cross between Japonica and Wattii. Received a special award at International flower show in N. Y. Flowers white with yellow crests surrounded by light lavender. The lacinated style branches are dainty lavender. Petals are waved and frilled. The 3½" flowers are freely produced. Flowers are lasting when cut and useful in artistic arrangements. Price 40c ea. Three for \$1.00.

Gladiolus

In order to avoid damage by thrips to their flowers, Gladiolus should be planted early. In the north this means as soon as the ground can be worked and there is no more danger of its freezing to the depth of planted bulbs.

In California, southern Arizona to southern Texas, where winters are mild, they may be planted between November 15 to March 1. There is usually no difference in the time of blooming between bulbs planted November 15 and March 1. They bloom together except when unusually warm winter weather causes earlier growth.

There is still time to plant Glads in the south and if planted during Feb., depending somewhat on spring weather, one is likely to have flowers for Decoration Day. But it can't be promised. At the Rancho de las Florest, we usually plant in succession from Jan. 1 to Apr. 1 and our flowers escape thrips damage. In northern Calif. and the coastal region one can safely plant later. In northern states, Glad planting may be the

first garden activity of spring. But to get Glad bulbs from us, you should order early as we try to plant all left over bulbs about Apr. 1. We usually sell out on some sorts before that date.

Thrips are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm.

To avoid the damage they do, three measures are effective: Plant early; plant clean, treated bulbs; keep them always moist by overhead sprinkling. Gladiolus that are sprinkled one-half hour every evening will seldom show thrips damage at any time of year. It is my opinion that thrips damage results almost wholly from the loss of liquids they cause, added to rapid evaporation in hot weather. Even when thrips are present we find daily overhead sprinkling washes off part of them and keeps the plants so full of liquids that the flowers are undamaged. But the plants must be made vigorous by previous good culture.

Treating Bulbs. Mix 4 teaspoonsful of Lysol in one gallon of water. Soak the bulbs 6 hours in this solution. It may be used several times but not after standing over one week. This is an acid solution and encourages root growth instead of delaying it. Do not treat bulbs bought from us. We treat before selling. We do not advise use of mercurial solutions as they injure the bulbs and delay root formation.

Napthalene flakes may be sprinkled over the bulbs in storage, covered and left a few weeks. The fumes kill the thrips.

Mosaic Disease. A few varieties, including Picardy and Betty Nuthall, have recently shown a tendency to become infected with mosaic. It does not hurt the bulb or plant but the flowers become mottled, which greatly detracts from their beauty. There is no cure but one can partly at least prevent its spread by pulling up such plants. It is spread among plants by biting insects, possibly even by thrips, or in cutting flowers. If one cuts from a diseased plant, then from a healthy one, it is likely that one has carried the virus which causes the disease to the healthy plant.

Plant 4" deep; small 3"; bulblets 2". Twice their diameter apart. We plant two rows, staggered in a 4" wide furrow or closer in a single row. Rows about 20" apart. Alkaline soils produce poor Glads. Soil should be neutral to mildly acid. Leaf mould or peat added is useful. Peat causes soil to dry out more rapidly and imported peat is hard to get. Domestic peat is often harmful because alkaline. Use no fresh manure, but well rotted manure is fine. Top mulch of leaf mould or imported peat is fine.

Keep Glads growing with plenty of water and best culture for at least two months after flowering. Longer is better for this is the period when new bulbs for next season are developing. It is best to dig bulbs in the south, and necessary in the north.

Fertilizers. Use only Superphosphate, a small handful to 6' of row, in furrows on both sides, after plants are about 1' high. Apply about once a month. Try a short space first. If it burns, use less. Some use Ammo-Phos with success but if much is used there is danger of ruining the bulbs. When we fertilize, we usually decide we have done more damage than good. Vigoro is being used successfully.

Soil pH for Glads should be 7 or lower as they prefer mildly acid soil and in strongly alkaline soils one cannot grow good Glads. The best preparation of the soil is to turn under largest possible quantities of well decayed leaf mould and humus.

Sizes and Prices. Regretfully we must cancel the 100 rate on Glad bulbs, but we still offer 12 bulbs for the price of 10, unless otherwise stipulated. Order only at the single or dozen rates this spring. 100 bulbs are 8½ doz. and may be so ordered. We cannot supply Glads for wholesale customers except at these retail prices.

The **Gladiolus Supply** is still far below normal. Last fall we were again too optimistic and priced our bulbs, in many cases, below what we could replace them for if one considers the postage and labor of packing retail orders and the fact that when we buy wholesale we must pay the express charges.

Therefore we were out of several sorts we listed in the fall. Some of these we have been able to replace but at a higher price. That's the bad news.

The **Good News** follows. We have been extremely fortunate in obtaining a few

of the newest and latest Glad introductions. Naturally, they cost more than the old favorites but we are sure you will want to try one, two or more of several, just to see what future Glads are going to look like.

Sizes. **Jumbo** means over 1 3/4" diam. and most of them are 2" or over. **L.** means "large," 1 1/4" diam. or more. **M.** means "medium" or 3/4" to 1 1/4" diam. **S** means "small" and are 1/2" to 3/4" diam. All these sizes will flower.

We have only the sizes and varieties as listed here and all previous listings and prices are cancelled. Contrary to the usual opinion, there is no difference in the quality of flowers produced by sizes 1, 2 or 3. Planted early and given good culture a #4 bulb will often be as good. The small sizes will flower and give only a little smaller spikes.

Substitutions. If we are sold out of a variety ordered we substitute another, as near like it as possible and to the same value. If you object to this say "no substitution." But we advise you to let us substitute. Glads are too scarce to take a chance on getting an exact variety and most dealers list them at prices higher than those below.

Albatros. Very large pure white. Jumbo 15c. L. 9c.

Algonquin. Very large, fine, brilliant red. By Palmer, originator of Picardy. Size #3. 15c ea. \$1.30 per doz.

Annie Laurie. Lovely, ruffled rose pink. L. 6c. M. 35c doz.

Bagdad. Very large flowers of misted old rose. Jumbo 12c. L. 6c. M. 40c doz.

Betty Nuthall. Coral pink and orange. Very popular for cut flowers. Jumbo 15c. L. 9c, 3 for 25c.

Bill Sowden. Very large deep red. 9c ea.

Capeheart. New. Exhibition quality. Salmon rose. 6" flowers. 8 open at one time. L. 25c.

Conquest. New. Salmon and yellow. Has been described as the most beautifully colored of any flowers. #3, 12c ea.

Corona. New. White edged rose, like the Picotee Tulip. A most beautiful Glad. #3, 15c ea.

Dr. Bennett. Flame red. L. 7c ea.

Dr. Moody. Large lavender pink. 8c.

Ethel Cave Cole. Exhibition quality. Tall, large flowered pink. Many open. L. 20c.

Golden Dream. Large, deep golden yellow. L. 6c.

Grand Master. New, rich dark red. L. 15c.

Los Angeles. Orange tinted, pink flowers. Jumbo bulbs 8c. L. 5c ea. M. 4c, 35c doz.

Margaret Fulton. Coral pink to rose doree. L. 9c.

Marmora. Immense smoky lavender. L. 8c.

Minuet. Lavender pink. Jumbo 15c. L. 8c ea.

Picardy. Tall, large shrimp pink. Most popular glad. Jumbo 15c. L. 8c.

Radiant Orange. Orange. Fine for cutting. Jumbo 12c. L. 6c. Per doz., 50c.

Red Phipps. A fine glowing red. Our stock contains a few Red Lory. L. 7c.

Sensation. Rightly named. Huge, deep pink flower. L. 15c.

Souvenir. A graceful spike of deep golden yellow flowers. L. 5c. Good blooming sizes, 35c doz.

Virginia. Fine pure red. L. 7c.

Wasaga. Apricot pink. Jumbo 10c. L. 5c. M. 40c doz.

Mixed. This includes lots too small to list, unlabelled or badly mixed lots and surpluses. Some fine Glads. Jumbos 12c. L. 6c ea. Per doz. 55c. M. 40c doz. Per 100, \$2.50.

Marica gracilis. Walking Iris or Apostle Plant. Beautiful 2" flowers of white and blue with yellow and brown marking in center. The flowers are followed by a small plant. The leaf-like stem bends over and the plant takes roots, thus walking away from the mother plant. Requires half shade and plenty of water. Often grown and is nice in pots in north. 50c.

M. Northiana. Rare. Similar to Gracilis but larger plant and flowers. \$1.50.

LILY FAMILY—Liliaceae

The type species is *Lilium*, or true Lily. Many call *Crinum*s, *Callas*, *Cannas* or any bulbs "Lilies," but this is an error.

***Lilium regale*.** Large fragrant, white flowers, tinted pink with cream throat. This is one of the hardiest and is easy to grow. It increases in size and number every year and becomes permanently established in the garden. It belongs in the perennial border along with Daylilies, Shasta Daisies, shrubs, etc. They prefer mildly acid soil and the addition of leaf mould and sand to your soil will give improved results. Mulch the ground or plant among shrubs or other plants that shade the soil surface but allows the plant to rise into the sunlight. Keep their feet cool and their heads warm. Large, over 2" diam. 30c ea.

***Gloriosa*.** **Climbing Lily.** The flowers resemble true lilies but surpass most of them in their gorgeous beauty and high coloring. They propagate by tubers instead of bulbs. The stem is branching and heavy and must be supported.

Culture. They must have sandy soil with leaf mould and peat added, acid (about pH 6.5), full sun or slight shade, plenty of water, perfect drainage. We usually plant before Mar. 1, but sometimes as late as May. They need a long season. Plant 4" deep. In the north they may be started early in pots and shifted.

***Gloriosa rothschildiana*.** It deserves the name, **Glory Lily**. Very vivid colors, red with yellow markings, turning later to deep red and then deep rose. 4 to 6 ft. tall. We have no small tubers this year. Large, \$1.00 ea. Extra large or jumbo tubers, \$2.00.

No ***G. superba*** or ***G. virescens*** this year.

***Galtonia candicans*.** **Summer Hyacinth.** Belongs in the group with Hyacinths and Scillas. 4 ft. scape with many white, bell shaped flowers. For landscape use in backgrounds and for cutting. Plant early, 4" deep in any good soil. Hardy in north if well protected, better to dig and store bulbs. 10c ea., 2 for 15c. 60c doz.

OXALIS FAMILY—Oxalidaceae

No bulbs have increased more rapidly in public favor in recent years. This probably results from magazine and radio publicity, and their more frequent appearance in gardens or as house plants. Plants and flowers are variable in form and color and are most attractive and dainty. **Culture.** Plant in full sun exposure in any good soil. All make lovely pot plants and should be grown freely in the garden. The flowers open only in the sunlight.

See the Fall Catalog for the winter growing types. The following are summer growers. In the north they may be potted now. Start slowly. Do not over water.

Oxalis Bowiei (Hort. *Bowieana*.) Altho this species grows quite well in the winter, it can be potted at this time or planted in the garden in early spring. It seems to be the most popular *Oxalis*. Large bright green leaves and large bright rose red flowers on a tall scape. 3 bulbs to a 5" pot. 3 for 20c. 60c doz.

***O. crassipes*.** Flowers bright rose. Evergreen and everblooming. Increases by tubers and can be moved at any time. Plant at once. Large tubers, 25c ea.

***O. Deppei alba*.** Very pretty clover-like leaves. Small white flowers abundantly produced. 4 bulbs for 15c. 40c doz.

***O. lasiandra*.** The prettiest summer *Oxalis*. Tall plant with 7 - 10 leaflets. Rosy carmine flowers. 5c ea. 6 for 25c. Jumbo bulbs, 10c. 75c doz.

***O. tetraphylla*.** Four large leaflets. Deep rose pink flowers on a tall stem. A fine species. 3 for 20c. 50c doz.

THE ORCHID FAMILY

The word **Orchid** is the synonym of floral beauty. The Lily, the Rose and the Amaryllis all have their devotees, but all admit that nothing in floral beauty can surpass that of Orchids. But the growing of most Orchids is an expensive luxury. The Cattleyas

cannot be grown even in an ordinary greenhouse but require a special house, correct in temperature and humidity. Only an experienced specialist can grow them. The following two orchids are not too difficult in pots in the north or in the outside garden in the south where minimum temperatures do not go much below 27°. Even at that temperature, if long continued they should be covered. Where temperatures descend to an occasional low of 20° - 24° one must be prepared with boxes, cartons, etc., and do a thoro job of covering.

Epidendron O'brienianum. The tall stems grow to a height of 3 ft. or more, are slender and require the support of adjoining plants or stakes. As the plant grows it produces terminal clusters of flowers thruout all the year when warm. This large cluster is composed of many small brilliant red flowers of a typical orchid form. Below each cluster as it withers, a lateral bud develops and continues the upward growth. At its base aerial roots develop. Propagation is effected by planting these air-rooted branches.

Culture. Epidendrons need a warm, almost full sun exposure and constant but not excessive moisture. They will grow in well drained sandy or sandy loam soil containing some gravel but it is better to incorporate 50% leaf mould or 35% or more peat for a distance of a foot around and under the plant.

Price of E. O'brienianum: cutting with aerial roots, 75c. Small clump, \$3.00.

Cymbidiums are immensely popular in So. California. Many are grown in greenhouses in England and we must admit the English have high appreciation for floral values. They are not very expensive nor yet very cheap, the minimum prices being about \$5.00 to \$7.50 per small plant.

The large 4" to 6" flowers are borne on a stem often 4 ft. long, and from 12 to over 30 in number. Well established plants may give 4 or more and large clumps up to 35 stems. The flower spikes remain in perfect condition for 8 to 12 weeks. When cut the flowers have unsurpassed lasting qualities and may be used many times in a corsage if kept in a refrigerator between times. Florists retail the flowers for only a little less than Cattleyas.

The flowers are of typical orchid form and in a wide range of colors. It is impossible to give accurate color descriptions of hybrid Cymbidiums as the hybrid is named from the cross and may include several seedlings not necessarily identical, tho close. Descriptions are usually only approximate but not always even that.

Culture. Cymbidiums are terrestrial orchids from India and Burma where they grow in the moist atmosphere of mountains and foothills in perfectly drained situations. The culture is easy enough if you note carefully our instructions. But you can't plant them and forget them. The shade of a lath house, lath spaced 1" apart, 50% shade, is about right. They do well in this exposure, or even a little more sun in our hot inland valleys and in cooler coastal regions the lath may be farther apart. The shade of trees giving filtered light and full sun in early morning or evening suits them well. They do well in a sandy or gravelly loam of acid reaction. In preparing our soil we dig to a depth of 10" and the same distance on each side of plant. We fill this hole with peat or peat and leaf mould. Leaf mould alone will do but use oak leaf mould, or more if ordinary leaf mould. This is thoroly mixed with the soil thrown out, wet a little and pressed down. The elevation resulting may be rounded over on sides.

The base of the plant is enlarged into a pseudo-bulb, surmounted by the foliage. This bulb must not be covered by soil. Insert it to a depth of only about 1/3 of its length. The plant may need support until roots form.

Set the plants in moist soil and water after planting to settle soil around them. At first, they must only be kept slightly moist until roots have developed. If moisture is excessive the pseudo-bulb will rot and the plant is lost. In warm weather, when plant is in full growth they will use more moisture. We sprinkle then a little every day or two. They make scant growth if allowed to become dry between waterings. But at no time should they be kept in a soggy condition. Provision must be made for perfect drainage in pots or garden.

Customers are sometimes alarmed if the roots of plants appear dead when received

or if roots have been removed. When *Cymbidiums* are moved, the roots die back to the pseudo-bulb. Roots usually start in about 6 weeks if you treat plants as advised.

In pots, they are reasonably easy. They can be grown in the same compost as required by *Begonias* or in soil as we described for outdoor culture. Give them a warm situation, not as cool as most plants require. We suggest an 8" or 10" pot. They can be set in an 8" pot and shifted when necessary.

The plants we offer consist of a single pseudo-bulb and foliage. They should flower in two years with correct culture. We have less than 1% flower in a year or less, tho it can happen. Even large plants when moved without soil require a year.

We send out only good plants. We have been held responsible for plants that died from no water at all and from too much. We cannot longer accept responsibility for wrong handling.

We ship by prepaid parcel post but we do not accept responsibility for freezing in transit to the north. You can avoid this risk by asking for delivery after April 1, or have them shipped by express, f.o.b.

Named Varieties cost about \$7.50 to \$10.00. A few rate a price of \$20.00 to \$50.00 and even more. We can furnish all those listed in our fall catalog at the same prices except *Veitchii*, which is now priced \$6.50. But on account of our offer of unlabeled plants last fall at a real bargain we sold few of these and do not list them here. If you do not have our Fall Catalog we will send it, first class mail, for 3c stamp or by Air Mail for 16c stamp.

Cymbidium Special. A large number of excellent named sorts, some rare, were accidentally mixed. If you are a beginner why pay at least 50% more for labeled plants? If you buy more than one, each will be taken from a different clump and may be different. Priced \$5.00 ea. \$60.00 doz. Strongest plants with a new bud started, \$6.00 ea. or with two or more started \$7.00 ea. No quantity discounts.

THE CALLA LILY FAMILY—*Araceae*

This family contains the so-called Calla Lilies or *Zantedeschias*, Fancy Leaf *Caladiums* and the genera, *Sauromatum*, *Amorphophallus* and others listed in our Spring catalogs.

Culture. **Baby Callas** are the only white callas that can be moved now. Grow them in slight shade to full sun in pots or garden. The soil should be half sandy loam, half fine leaf mould. **Baby Calla** is evergreen and should never be dried off.

The **Colored Callas**, Yellow, Pink and Spotted Leaf do exceptionally well in pots. They start more easily now than in late Dec. Give them a 5" or 6" pot, soil like Baby. Cover bulb 1". Keep only moist, not wet, until well up. Give them a warm sunny window. If too sunny a lace curtain may be enough shade. They usually bloom quite early, only a few weeks after planting. They are fine in the garden. Here we plant Feb. 15 to Apr. 1, in a lath house or other half shade. Dig bulbs and keep them dry as soon as tops yellow. See other culture notes with the listings.

***Zantedeschia aethiopica* var. Baby Calla.** This is the smallest and whitest calla. Small enough for corsage. We send small bulbs as the large bulbs make larger flowers, approaching in size those of Godfrey. For tiny 1" flowers replant your small bulbs. 20c ea. 3 for 50c. \$1.75 per doz.

***Z. albo-maculata*. Spotted Leaf Calla.** White flower. The spear shaped spotted leaves are most decorative even without flowers. 20c. \$2.00 per doz.

***Z. elliotiana*. Yellow Calla.** The most desirable colored Calla. The lovely deep yellow flowers, with the spotted foliage, make a perfect, easily grown and low priced pot plant. Ours are extra fine, high crowned bulbs. 20c, 25c and 30c ea.

***Z. rehmanni elegans*.** Its shell pink flowers, many think, are nicer than the darker type. It is also taller, larger and easier to grow. Jumbo bulbs, 2" - 2½", 75c.

***Amorphophallus revieri*. Sacred Lily of India.** Rich tropical foliage and 2 ft. long flowers. Arum "fragrance." Plant 4" deep, half shade, early spring or pot now. Bulbs at 10c, 50c, \$1.00 up to \$2.50. Only largest bloom.

Sauromatum venosum. Lizard Lily. The spathe is very long, narrow, lies on ground and is serpent like in color. Same culture as above. Hardy. Order early as all bloom by Mar. usually. Bulbs at 10c to \$1.50. Only largest bloom.

Fancy Leaf Caladiums

They are the most gorgeous pot plants grown. The foliage shows the brilliant and exquisite tones of the Lily and Orchid, the richness of Coleus and the luscious shades of the Rose. There is not a single plant in creation that will condense so much color in an equal space.

We were particularly fortunate this year in being able to get a good supply of bulbs from Florida's best grower. The bulbs are much better than any that could be had last year. Frankly, better than we could get.

We offer only the finest varieties and the best bulbs obtainable. They cost us more than seedlings, mixtures or bulbs from indifferent growers.

Culture. They should have very rich sandy loam, with equal quantity of humus. This humus should be half well rotted dairy manure. If old dairy manure is not available, use fine rotted leaf mould. Enough of the humus should be peat to render the soil at least neutral to slightly acid. pH 7 will do.

Caladiums must have warmth in all stages. When starting and growing. Even when dormant, leave the bulbs in a warm room. Do not try to start the bulbs in a cool room. They must not be planted outside until quite warm. Caladiums are chiefly used as pot plants. They do well in outside gardens but require much humidity. In the dry air of So. Calif. the plants should have constantly moist soil. Semi-aquatic conditions are fine but not wholly essential. But start them off with only slight moisture. When they are up, gradually increase. Give very weak liquid fertilizer when in full growth. Plant about 3" deep. Full sun brings out the rich colors but So. Calif. sun is too "full." We give slight shade.

Your choice of the following sorts.

Mrs. W. B. Haldeman. Beautiful transparent rose leaf, pea green veins with narrow dark green border. One of the very finest varieties and a strong grower.

Lord Derby. Beautiful rose pink leaf, with dark green veins and ribs.

Candidum. Snow white leaf with dark green veins and ribs.

D. M. Cook. Ruffled leaf, deep plum colored center, spotted and splashed deep red.

Marie Moir. Snow white leaf with dark green ribs and veins and dark red spots scattered over entire leaf.

Reconcavo. Deep rose center with carmine ribs on dark green leaf.

Sorocabo. Pale rose to white with deep green ribs and veins.

Spangled Banner. Entire leaf glowing red with red spots thruout.

Altho we have better bulbs this year and wholesale prices are higher, we are cutting our profit and reducing the retail price as we were able to get a rather large quantity,— enough to fill all orders, we believe. Price 40c ea. Per doz. \$3.75. One each of 4 varieties for \$1.50. Wholesale, \$30.00 per 100 by express, f. o. b.

Begonia Family. Begoniaceae

Tuberous Rooted Begonias. Wonderfully attractive bulbous plants for pots or a cool moist spot in the garden. They are nice around a Camellia if not too shaded. We are again fortunate in being able to get an apparently sufficient supply of Begonia bulbs, not only enough but larger and better bulbs and in more colors. Last year we could get only half enough and had to refund or substitute other bulbs for almost half our orders. Altho we think we have enough Begonias, Caladiums and Gloxinias, it is wise to order at once as the bulbs are not plentiful and the demand on those who have them may develop surprises.

Culture. The best soil is half humus and half fine sand or sandy loam. For humus, use $\frac{2}{3}$ peat or leaf mould and $\frac{1}{3}$ well rotted cow manure made fine by rubbing thru

screen, no lumps. Acid soil is required. Improve this soil if convenient by adding charcoal or a little soot. Give manure water and soot water (handful to 2½ gal.) during growth. Sprinkle daily when growing well but there must not be too much moisture around bulbs before they sprout or they may rot. A good way to start Tub. Begonias bulbs as well as F. L. Caladiums or Gloxinias is in slightly moist peat or sphagnum moss in a warm room. Don't hurry them and do not expect them to start too early. Another way is to pot them only when sprouts start.

Giant Double Camellia Flowered Begonias are the very best. We offer them in the clearest and most desirable colors, **white, yellow, rose, pink, orange, apricot, salmon, scarlet and red.** Large bulbs 1½" - 2" diam. Price 35c ea. All 9 sorts for \$3.00.

We can furnish smaller bulbs, from a very famous grower, in the following colors: **White, blush, rose, pink, yellow, apricot, orange, dark red, scarlet, dark salmon, cardinal red, flame orange, light salmon, crimson rose and American Beauty.** Size 1" - 1¼". This size grows well, makes fine plants and flowers. It is the size professional growers use for potting. Price, 18c ea. 3 for 50c. All 15 colors for \$2.40.

Incidentally the colors in this lot are different in tone from those of the larger bulbs and the two full collections will give you 24 different varieties. Price, 24 sorts for \$5.25.

Gloxinias. Gesneriaceae

Gloxinias rank with Fancy Leaf Caladiums as showy pot plants, for their foliage as well as for their large and gorgeously colored flowers. **Culture.** Plant in about a 6" pot using soil as described for Begonias. Barely cover bulbs. Handle about the same as for Begonias including the feeding and watering. In watering do not let any moisture touch leaves. They require part shade and protection from winds if outside. When flowering ceases and foliage has fully matured gradually lessen the water given. When the foliage has all ripened off, the pots may be stored in a room at about 45° but give just enough water to prevent tubers from shriveling. Toward mid-Feb., those that show signs of growth may be brought out and started.

Last year we were able to obtain delivery of only 50 bulbs, and needed 1000 or more. As a result most of our customers were disappointed. Gloxinias were almost a crop failure then and altho they are still scarce we are assured by two growers that they can deliver the bulbs to us this year. We are listing larger bulbs for the same as last year's price in the following varieties.

New American Hybrids. A superior strain in a great variety of color tones and combinations. (The following are European.)

Blanch de Meru. Rose with white throat.

Emperor Frederick. Scarlet, bordered white.

Emperor William. Violet, bordered white.

Mont Blanc. Pure white.

Price, 1¼" - 1½" bulbs, 45c ea. The 4 European sorts and 2 American hybrids, 6 bulbs for \$2.50.

BILLBERGIAS Bromeliaceae

Billbergias have a rich, tropical appearance with the showiest inflorescence. In both foliage and flowers they are most unusual and most lovely. The foliage is stiff and erect, forming a cup. They are tender tropicals that are easily grown in pots but do well outside in So. Calif.

Being epiphytes they should be rooted in almost pure leaf mould, wood earth (rotted wood), peat or sphagnum moss mixed with a little sand for greater substance. But they do quite well in half sand and half leaf mould or peat. Here they need half shade, but in the house, a sunny window is usually right. Sun brings out rich colors of foliage but don't overdo the sun exposure as it may burn the leaves and prevent their functioning. The "cups" should hold a drink when growing. In the winter they rest

and when you start them in winter do it "easy like." Not too much water until well rooted and growing, but never allowed to dry out.

Billbergia nutans. The earliest to flower, often late Dec., usually in Jan. - Feb. The inflorescence is most beautiful. Price 50c. With bud showing, \$1.00.

B. distachia hybrid. Foliage reddish green with cream spots. Long spikes with rose pink bracts and blue margined green flowers. Blooms in early spring and a few in late summer. \$1.00.

B. rubro-cyanea. The foliage has very rich variable markings of green, red and white. Flowers green, edged dark blue with crimson bracts. \$1.50.

N.B. During very cold weather, it is better either to add about 20c for extra postage on very heavy packing or ask for delivery about April 1.

Miscellaneous

Anemones. We still have a few of those 2 yr. old Anemone bulbs, mostly size #3. Most reports show they grow 50% or better but a few customers failed. They are offered "as is," no guarantee. **Culture.** Plant 1" deep, 3" apart in good garden loam. If planting is followed by heavy rains, tell them "good bye." They should not be wetter than barely moist until they come up. Give full sun exposure. In the north, plant early in the spring. Price 50c per 100.

Esther Reed Daisy. The favorite, fully double Shasta Daisy. Very useful for cutting. They must be moved while dormant and before Mar. 1, as they are likely to start here about that time. If too cold to plant outside in the north they can be potted and shifted to garden later. Single divisions, 25c ea., 3 for 60c. \$2.35 per doz.

Royal Robe Violet. Large lustrous flowers of deepest violet blue on long stems. Grow them outside or in pots like any other violet. In forcing in pots give a temperature of not over 50°. They do not like heat or too intense sunlight. Price 30c, 4 for \$1.00. Per doz. \$2.90.

Clivia miniata hybrid seed. Plant on top of soil in pot or pan. Soil should be loose and friable sandy loam and leaf mould. Water and cover with pane of glass and keep in full shade. Very little water will be needed for some time and then only enough to preserve a moist condition. If radicles do not penetrate soil, help them. 25c ea. 3 for 60c. \$2.25 per doz.

Aunt Mary—Golden Bantam hybrid seed corn. The two sweetest, tenderest and best varieties crossed. Some dry seed are white, some yellow, but all are hybrid. 35c per packet.